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Worcester Public Schools Review

Executive Order 393

Education Management Accountability Board Report

October 1998

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I. Introduction

The Massachusetts Education Reform Act (MERA) of 1993 has three major goals: to increase student achievement; to achieve adequate funding for all local and regional school districts over a seven-year period; and to bring equity to local taxation efforts based on a community's ability to pay. In February 1997, the Governor issued Executive Order 393 to evaluate the education reform program that was nearing the end of its fourth year. In FY98, Massachusetts General Laws (M.G.L.) Ch. 70 state aid for education reached $2.3 billion. With an investment of this magnitude in the Commonwealth's schools, it is critical to "review, investigate and report on the expenditures of funds by school districts, including regional school districts, consistent with the goals of improving student achievement." To that end, Executive Order 393 established the Education Management Accountability Board (EMAB).

The Secretary of Administration and Finance, serving as chief of staff to the EMAB, selected a team of auditors from the Department of Revenue's (DOR) Division of Local Services (DLS) to conduct the school district reviews. DOR's Director of Accounts is the chief investigator with authority to examine municipal and school department accounts and transactions pursuant to M.G.L. Ch. 44, §§45 and 46A. The reviews are conducted in consultation with the State Auditor and the Commissioner of Education.

The Worcester Public Schools (WPS) is the sixth school district reviewed under Executive Order 393. The audit team began the review of WPS in May 1998, and completed it in July 1998. As part of this review, the audit team conducted a confidential survey of employees of the school district and included the results in this report. School officials cooperated fully with the audit team.

The Executive Summary includes some of the more significant observations and findings of the review of WPS's operations. When possible, the audit team has identified and presented best practices which may be adapted by other school districts. The report discusses all results, best practices and deficiencies, if any, in greater detail in the "General Conditions and Findings" section.

II. Executive Summary

Findings

The findings are grouped into several broad categories addressed in the Education Reform Act: the Foundation Budget, Student Achievement, Governance and Management Powers, Student/FTE Teacher Staffing, Teacher Compensation, Professional Development, Time and Learning and Best Practices.

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SUMMARY

WPS took positive steps to implement various aspects of the education reform law soon after it was passed in 1993. School improvement plans are prepared with care and appear to play an important role in the overall planning and management process. Principals and teachers clearly understand the education reform related goals and objectives set by the administration. Evaluation tools, in place for both principals and teachers, are used annually.

There has been an effort to improve test scores by implementing certain programs and by addressing weaknesses in specific academic areas. This approach appears to be successful as test scores in the Massachusetts Educational Assessment Program (MEAP) have shown significant improvement over recent years and notably, the percentage of students who performed in the lowest category of academic proficiency decreased in all subject areas in the 4th and 8th grades.

THE FOUNDATION BUDGET

- WPS has exceeded the net school spending requirements as determined by the Department of Education (DOE) for FY94 to FY97 and is expected to have met the FY98 requirement when final reports are submitted to DOE in October 1998. The district received $56.4 million in state aid in FY94, $91.1 million in FY97 and cumulatively, $290.6 million from FY94 to FY97 as a result of Massachusetts' investment in education. Taking inflation into account, there are still significant real budget increases from FY89 to FY97. [See Sections 3 and 5]

- The foundation budget does not mandate spending in any specific category. However, to encourage appropriate levels of spending, M.G.L. Ch. 70, §9 requires that a school district report to the Commissioner of Education when it has failed to meet foundation budget spending levels for professional development, books and instructional equipment, extended/expanded programs and extraordinary maintenance. Although WPS did not meet these levels from FY94 to FY97, it did not file a report as required by law nor did DOE direct it to do so. Foundation spending targets were met in FY97 in the salary expenditures for teachers, assistants and principals. [See Section 7]

STUDENT ACHIEVEMENT

- WPS test scores are below state averages but show improvement over recent years. MEAP scores increased significantly in grades 4 and 8 in all four subject matter areas. Results from the 1997 statewide Iowa tests indicate that 70 percent of WPS 3rd graders scored at the higher reading levels of "proficient" and "advanced," slightly below the statewide average of 75 percent for these skill levels. WPS 10th graders scored at the 45th percentile in the Iowa achievement test when compared to a representative national sample of students. [See Appendices C and D]

GOVERNANCE AND MANAGEMENT POWERS

- Administrators and principals currently work under individually negotiated contracts varying in length from one to three years. They are expected to meet specific performance goals and are held accountable for their performance. Contracts are similar in structure and content and include an appendix explaining the salary structure. Since September 1996, all principals have individual contracts. Annual salary increases range from one to four percent depending on performance evaluation. [See Section 17]

STUDENT/FTE TEACHER STAFFING

- WPS has used the increased funding to increase staffing above levels reached in FY89. Between FY93 and FY97, the total number of FTE teachers increased by 337, or 23.0 percent, from 1,468 to 1,805. As a result, the all students/all FTE teachers ratio declined from 14.6:1 in FY93 to 13.1:1 in FY97, a positive trend for educational achievement. [See Section 8]

TEACHER COMPENSATION

- Between FY93 and FY97, expenditures for teaching salaries rose 42.5 percent, reflecting additional spending for new staff as well as pay raises in the teachers' contracts. Total salaries increased by 44.3 percent while non-teaching salaries rose by 48.5 percent. Union contract increases for teachers have ranged from 18 percent to 21 percent, plus annual step increases, for the four year period 1993 to 1997. Actual salary increases ranged from 19 percent to 54 percent, depending on how a teacher moved through the salary schedule during that period. [See Section 9]

PROFESSIONAL DEVELOPMENT

- WPS has a professional development program including workshops and training sessions in a variety of educational areas. Professional development spending has increased from $330,514 in FY95 to $1,997,382 in FY97. Expenditures in FY95 represented only 15 percent of foundation budget spending; in FY97, spending on professional development had reached 80 percent of the foundation budget target. Although WPS did not meet the target in these years, it did meet the per student spending requirement in FY96 and in FY97. [See Sections 7 and 10]

TIME AND LEARNING

- For the 1997/98 school year, WPS is exceeding DOE's minimum school time requirement of 990 hours with a schedule of 996 hours for grades 9 through 12. The elementary school schedule calls for 930 hours, above the 900 hours per year DOE standard for these grades. [See Section 12]

BEST PRACTICES

- The school improvement planning process appears well thought out. It includes clear and specific instructions about the type of information which should be available to school council members for the preparation of school improvement plans. Generally, goals and objectives are measurable. A rolling three year time frame with annual updates is used for specific goals. [See Section 11]

- WPS has a dedicated television channel on cable TV which airs a program entitled "Homework Hot Line" regularly during the school year. Students call teachers in the studio with their questions. Teachers will then address the subject with viewers. [See Section 14]

- WPS has recently developed a Diagnostic Preparation Process to identify student weaknesses in curriculum content and skills. Instructors teach and re-teach targeted content and skill areas until the student achieves mastery of the content or skills. This process includes training for teachers in giving and scoring open ended tests, as well as increasing open ended questions on homework and exams. [See Section 16]

- A Cohort Analysis approach is applied to grade 3 Iowa tests to assess students' specific weaknesses. This approach uses pre- and post- tests for the same students during the same time period. Based on the results, specific areas in which students performed poorly are addressed to improve future test scores. [See Section 16]

- The management system implemented by the Superintendent's office is a well integrated strategic planning system which translates top level goals into organizational and individual goals. Monitoring and evaluation systems measure progress and hold staff accountable for performance at all levels. Monthly management meetings generally include a review of operational statistics for all schools from computer reports provided to all participants. Management addresses significant variance from expected norms and takes follow-up and/or corrective action steps. [See Section 17]

- Since September of 1996, teachers have been setting goals and objectives as part of their evaluation process. Each year, teachers are given specific goals to achieve consistent with systemwide goals and objectives. [See Section 17]

Auditee's Response

The audit team held an exit conference with the Superintendent and his staff on August 26, 1998. The team invited WPS to suggest specific technical corrections and make a formal written response to the report by September 4, 1998. Comments were received, changes were made as a result of these comments and a revised report was provided to the Superintendent. The Superintendent provided further comments which are contained in Appendix G. They have been addressed in this report.

Review Scope

In preparation for the school district reviews, the audit team held meetings with officials from DOE, the State Auditor's Office and other statewide organizations such as the Massachusetts Taxpayers Foundation, the Massachusetts Municipal Association and the Massachusetts Association of School Superintendents. The audit team also read published reports on educational and financial issues to prepare for the school district reviews.

The audit team met with the private audit firm that conducts financial audits of WPS. In addition, DOE provided data including the end-of-year reports, foundation budgets, evaluations of test results for WPS students, as well as statewide comparative data. The DOR's Division of Local Services Municipal Data Bank provided demographic information, community profiles and overall state aid data. While on site, the audit team interviewed officials including, but not limited to, the mayor, the school committee chair, the school Superintendent, the business manager and several principals. Documents reviewed included both vendor and personnel contracts, invoices, payroll data, statistics on students and teachers as well as test results and reports submitted to DOE.

In keeping with the goals set out by the Education Management Accountability Board, the school district review was designed to determine whether or not basic financial goals related to education reform have been met. The audit team gathered data related to performance such as test scores, student to teacher ratios and class sizes to show results and operational trends. However, this report does not intend to present a definitive opinion regarding the quality of education in WPS, or its successes or failures in meeting particular education reform goals. Rather, it is intended to present a relevant summary of data to the EMAB for evaluation and comparison purposes.

The focus of this review was on operational issues. It did not encompass all of the tests that are normally part of a year-end financial audit such as: review of internal controls; cash reconciliation of accounts; testing compliance with purchasing and expenditure laws and regulations; and generally accepted accounting practices. The audit team tested financial transactions on a limited basis only. The audit team also excluded federal grants, revolving accounts and student activity accounts. The audit team did not test statistical data relating to enrollment, test scores and other measures of achievement. This report is intended for the information and use of EMAB and WPS. However, this report is a matter of public record and its distribution is not limited.

III. General Conditions and Findings

1. Worcester Overview

Worcester is the second largest city in the Commonwealth with an estimated population of 165,387 in 1994. Like many Massachusetts school districts, Worcester faced budgetary

pressures in the early 1990's as a result of an economic recession and the associated decline in municipal state aid for education and in financial contributions to schools. Consequently, Worcester experienced a budget reduction in FY92 and found it necessary to reduce the number of teachers and curtail certain educational programs.

Charts 1-1 and 1-2 show some key demographic and economic statistics for Worcester.

Chart 1-1

City of Worcester
Demographic Data

1994 Population	165,387
FY97 Residential Tax Rate	$18.67
FY97 Average Single Family Tax	$1,825.00
FY98 Avg. Assessed Value Per Single Family	$97,729
FY97 Tax Levy	$119,935,360
FY97 State Aid	$146,742,993
FY97 State Aid as % of Total Revenue	43.9%
1989 Per Capita Income	$13,393
1996 Average Unemployment Rate	4.3%

Note: Data provided by DLS

Worcester's minority student population makes up 43 percent of students. To address the issue of racial imbalance in schools, Worcester adopted a voluntary desegregation plan in the 1987/88 school year developing student assignment and transfer plans. The district set up a parent information center to serve as the central enrollment office for all new students coming into elementary and middle schools.

Appointed to his current position in 1993, the Superintendent has worked in the Worcester school system for many years. The deputy superintendent, the business manager, the director of human resources, the MIS director and the director of plant and facilities report directly to the Superintendent.

The deputy superintendent handles operational and academic management of the schools. Reporting to the deputy superintendent are five quadrant managers who have responsibility for all schools in their quadrant. The principals report to these quadrant managers.

As of our audit date, WPS consists of four high schools (grades 9-12), an Alternative Learning Lab (grades k-12), four middle schools (grades 7 and 8), one middle school (grade 7) and 40 elementary schools (grades pre K-6). One school, Doherty high, includes a gifted and talented program housed in a separate school building for grades 7 and 8. The total school enrollment was 23,965 as of October 1997, with 4,654 students enrolled in the senior high school. On

July 1, 1998, the city's vocational school, previously reporting to the city manager, was transferred to WPS.

In 1997 the high school drop-out rate was 6.8 percent, twice the statewide average of 3.4 percent. A special drop-out prevention program is slated to start in FY99, and funding for the program has been included in the budget.

Of the WPS high school graduating class of 1996, 49.1 percent intended to go on to a four year college, a rate somewhat lower than the statewide figure of 54.1 percent. Students planning to go on to two year colleges added another 29.0 percent for a total of 78.1 percent of seniors planning to continue their education. This rate compares favorably to the equivalent statewide percentage of 72.2 percent.

Chart 1-2

Worcester Public Schools
Demographic Data
School Year 1996/97

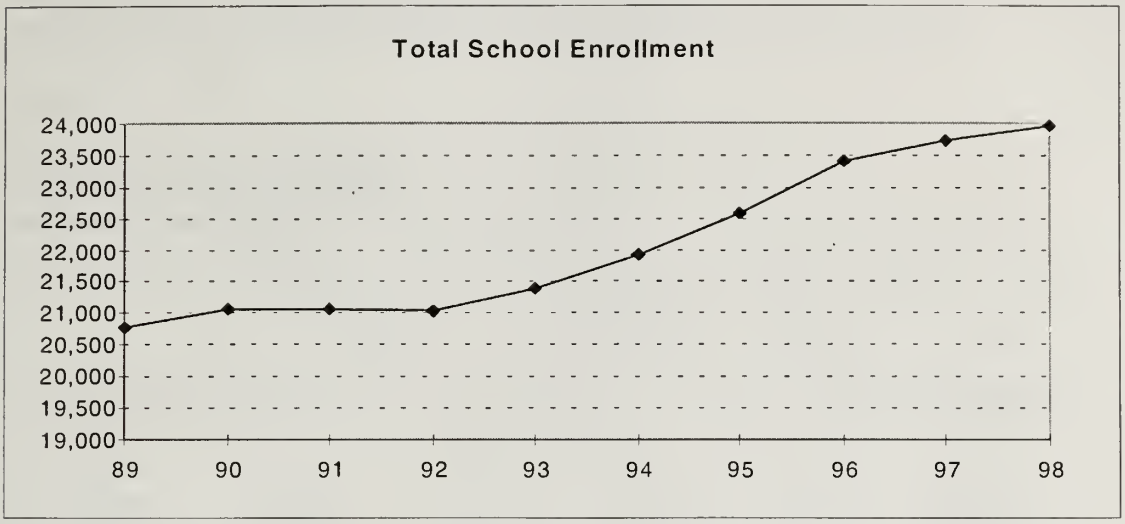
	WPS	State Average
Enrollment Race / Ethnicity		
White	57.1%	77.9%
Minority	42.9%	22.1%
First Language not English	23.6%	12.7%
Limited English Proficiency	7.1%	4.7%
Special Education	17.1%	16.5%
Percentage Attending Private School	12.2%	10.8%
High School Drop-Out Rate	6.8%	3.4%
Plans of Graduates Class of '96		
4 Year College	49.1%	54.1%
2 Year College	29.0%	18.1%
2 or 4 Year College	78.1%	72.2%

Note: Data provided by DOE

As shown in *Chart 1-3*, enrollment has increased steadily from 20,766 in October of 1988, the 1988/89 school year, to 23,965 as of October 1997, the 1997/98 school year. The only exception to the trend was the 1991 and 1992 school years when enrollment actually decreased slightly from the 1990 school year.

Chart 1-3

Worcester Public Schools
Total Student Enrollment
School Years 1988/89 to 1997/98



Note: Enrollment figures are as of October each year. Data obtained from WPS.

The following *Chart 1.3.a* illustrates the relative growth in the elementary schools in contrast to the decrease in the middle and high school levels expressed in terms of percentage of total enrollment.

Chart 1-3a

Worcester Public Schools
Distribution of Enrollment by Type of School

Year	Elementary Pre-K	Elementary K-6	Middle School	High School	Total Enrollment
88-89	0.7%	61.9%	15.4%	21.9%	100.0%
89-90	0.9%	63.1%	15.1%	20.9%	100.0%
90-91	1.1%	64.1%	14.4%	20.5%	100.0%
91-92	1.5%	64.1%	14.3%	20.1%	100.0%
92-93	1.8%	63.9%	14.5%	19.8%	100.0%
93-94	2.0%	64.4%	14.3%	19.2%	100.0%
94-95	2.5%	63.7%	14.2%	19.6%	100.0%
95-96	2.8%	63.2%	14.3%	19.7%	100.0%
96-97	3.1%	62.7%	14.2%	20.0%	100.0%
97-98	3.5%	63.1%	14.0%	19.4%	100.0%
Percentage Point Change 88-89 to 97-98 School Year	**2.8%**	**1.2%**	**-1.5%**	**-2.5%**	

Chart 1.4 shows the enrollment trend for the school years 1988/89 through 1997/98 as reported each October by the school district. Enrollment increased by 15.4 percent over that period, a slightly higher rate of increase than the statewide increase of 15.1 percent. High school and middle school enrollment increased slightly but at a slower rate than the state average. Elementary grades 1 to 6 increased 20 percent, which was slightly below the state average of 22.1 percent. Finally, pre-k and kindergarten enrollment has increased by 35.3 percent, which is higher than the statewide increase of 20.7 percent.

Chart 1-4

Worcester Public Schools
Student Enrollment

	Elementary School		Middle School	High School	Total
School Year	Pre K & K	1 - 6	7 - 8	9 - 12	Enrollment
88-89	2,327	10,677	3,207	4,555	20,766
89-90	2,365	11,123	3,185	4,408	21,081
90-91	2,443	11,288	3,024	4,311	21,066
91-92	2,447	11,362	3,014	4,229	21,052
92-93	2,607	11,452	3,097	4,248	21,404
93-94	2,767	11,803	3,142	4,212	21,924
94-95	3,013	11,935	3,202	4,418	22,568
95-96	3,112	12,351	3,345	4,611	23,419
96-97	3,122	12,486	3,366	4,754	23,728
97-98	3,149	12,813	3,349	4,654	23,965
WPS 89-98 % Change	35.3%	20.0%	4.4%	2.2%	**15.4%**
State 89-98 % Change	20.7%	22.1%	21.8%	2.8%	15.1%

Note: Data obtained from WPS

In verifying the accuracy of the enrollment numbers, the audit team noted a small variance between the numbers maintained by WPS enrollment system and those reported to DOE on the October 1st Enrollment Report. Specifically, our testing revealed that the October 1st Enrollment reports for 1995, 1996 and 1997 were understated by 0.7 percent (approximately 160 students) due to WPS failure to include "Tuitioned Out" students in the report. The undercounting has no net impact on the total state aid received by WPS during the period covered by the Education Reform Act.

2. School Finances

Overall, WPS has benefited greatly from additional funds available due to education reform. The significant state education aid increases in the FY93-FY97 period provided for real growth in school budgets, allowed the district to make progress in moving towards its foundation budget target and meet basic net school spending requirements. The additional funding allowed administrators to hire more teachers, increase teaching salaries and spend money on new initiatives and outside expert help to address areas for improvement, especially certain academic areas where student weaknesses were addressed.

School district funding and financial reporting requirements are generally complex and become especially complicated in the context of education reform. A district annually determines how much money it will spend on education. However, DOE considers only certain expenditures and funding when determining whether or not a district meets education reform requirements.

This audit examines school funding primarily from three perspectives: the school committee budget; net school spending; and the foundation budget.

The audit team examined the school committee budget in some detail as a matter of practice because it reflects basic financial and educational decisions, provides an overview of financial operations and indicates how the community expects to meet the goals and objectives of education reform.

Net school spending, the sum of the required minimum contribution from local revenues plus state chapter 70 education aid, is a figure issued annually by DOE that must be met by school districts under education reform.

The foundation budget is a school spending target under education reform which the school district should meet. Calculated on the basis of pupil characteristics and community demographics, it is designed to insure that a minimum level of educational resources is available per student in each school district. Under education reform, all school districts are expected to meet their foundation budget targets by the year 2000.

3. School Committee Budget Trend

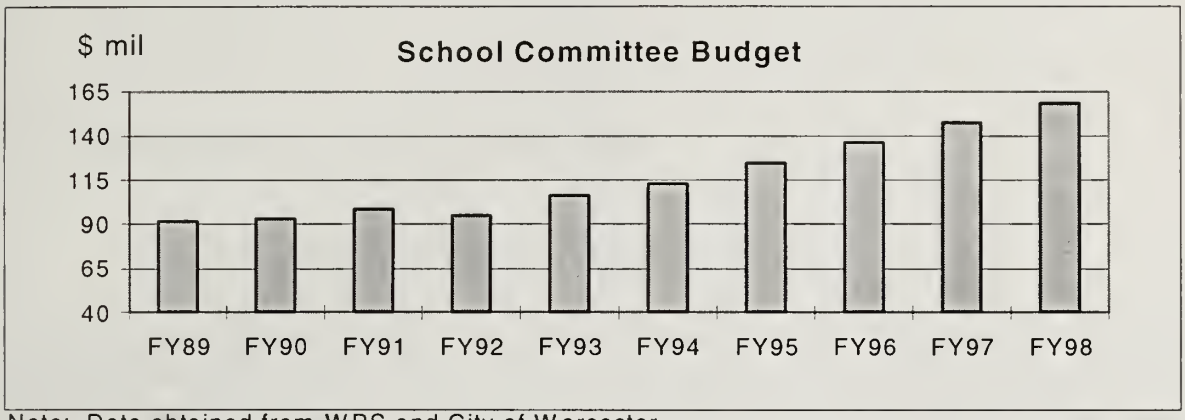
Chart 3-1 illustrates the trend of the school committee budget from FY89 to FY98. The vocational school budget and certain school related capital items which are appropriated in the city budget are not included in this analysis. Employee benefits and school liability insurance, previously appropriated in the city budget and subsequently transferred to the school committee budget, are included as expenditure amounts in the fiscal years to which they are attributable. The teachers' salary budget for FY92 and FY93 is net of amounts deferred as teachers' summer pay. For FY92 and FY93 only, general legislation authorized a budgetary deferral of teachers' summer pay at local option. The City of Worcester adopted the deferral option for both fiscal years which totaled, including the vocational school teachers' pay, $6.8

million. Although the legislation allowed an amortization of the deferral over 15 years beginning in FY97, the city eliminated the liability in FY96.

The total school committee budget as adjusted increased by $14.3 million or 15.5 percent between FY89 and FY93. With the significant increase in state aid due to education reform, the increase was $41.1 million, or 38.7 percent between FY93 and FY97, from $106.2 million to $147.3 million. The FY98 budget further increased over FY97 by $11.0 million, or 7.5 percent. Of the budgets shown, only the FY92 budget showed a decrease from the previous fiscal year.

Chart 3-1

WORCESTER PUBLIC SCHOOLS
SCHOOL BUDGETS FY89-FY98

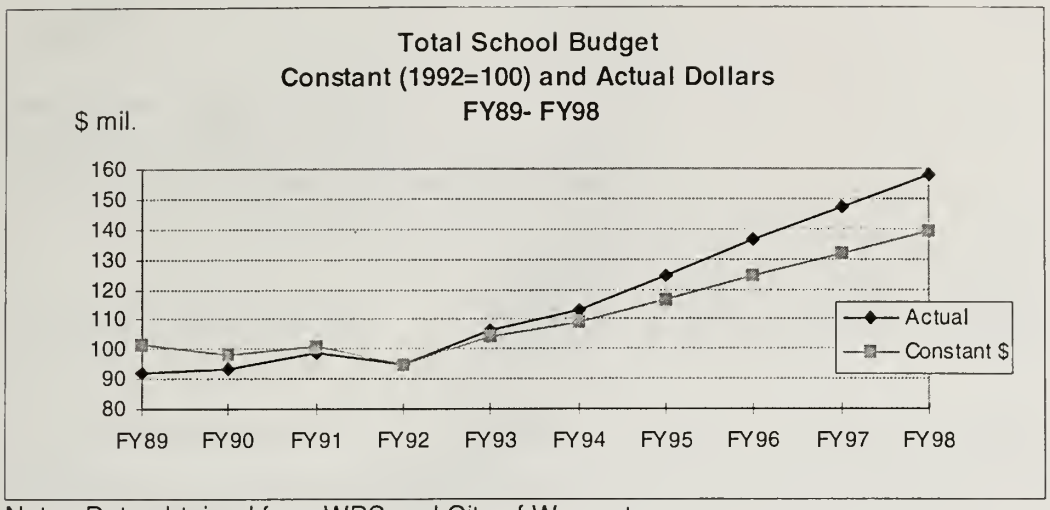


Note: Data obtained from WPS and City of Worcester

Chart 3-2 shows the school committee budget as adjusted from FY89 to FY98 in constant dollars, where FY92 is set at 100. The chart illustrates how the school committee budget fared with respect to inflation over time. From FY89 to FY97, the school committee budget as adjusted increased from $101.5 million to $131.8 million, a 29.9 percent increase in constant dollars. From FY93 to FY97, it increased $27.8 million, or 26.7 percent in constant dollars, from $104.0 million to $131.8 million. In constant dollars, WPS experienced a net budget decrease in FY90 and in FY92.

Chart 3-2

Worcester Public Schools
School Budgets in Constant Dollars FY89-FY98



Note: Data obtained from WPS and City of Worcester

4. Total School District Expenditures

Expenditures paid for by the city on behalf of schools were $28.1 million in FY93 and decreased to $9.9 million in FY97. The major components in FY97 were health services ($2.1 million), long term debt service ($6.0 million) and general administrative services ($1.0 million). These expenditures are added to those reported by the school system to arrive at total school district expenditures as reported to DOE. It should be noted that in FY94, the city transferred approximately $18 million in health costs from the general municipal budget to the school budget for purposes of reclassification of costs. *Chart 4-1* illustrates Worcester's total education reform related expenditures from FY89 to FY97.

Chart 4-1

Worcester Public Schools
Total School Spending
(in millions of dollars)

	FY89	FY93	FY94	FY95	FY96	FY97
School Committee	$ 79.8	$ 87.1	$ 113.1	$ 124.2	$ 136.0	$ 147.3
City	$ 17.8	$ 28.1	$ 12.8	$ 10.0	$ 10.2	$ 9.9
Total	$ 97.6	$ 115.2	$ 125.8	$ 134.2	$ 146.2	$ 157.1

Notes: These costs are per DOE end of year reports. Amounts may not add due to rounding

Chart 4-2 shows the FY94 to FY97 trend in net school spending per student. It indicates that actual net school spending per student has increased from $4,877 in FY94 to $6,070 in FY97, or 24.5 percent. The inflation adjusted figures have also increased significantly from $4,708 to $5,429, or 15.3 percent in 1992 dollars.

Chart 4-2

Worcester Public Schools
Net School Spending Per Student
Actual and Constant (1992=100) Dollars

	FY94	FY95	FY96	FY97	FY94-FY97 % Change
Expenditures/Student in Actual $	$4,877	$ 5,240	$ 5,761	$ 6,070	24.5%
Expenditures/Student in 1992 $	$4,708	$ 4,911	$ 5,246	$ 5,429	15.3%

Note: Data obtained from WPS

5. Net School Spending Requirements

Pursuant to education reform law DOE develops annual spending requirements and budget targets for each school district. The requirements are based on a formula which is used to set specific minimum spending requirements and in combination with other factors is also used to set "foundation" budget targets as well as determining the amount of state aid for each district.

To comply with minimum spending targets each school must meet a "Net School Spending" requirement. Expenditures which count towards a district's "net school spending" generally include all education related expenditures paid for with state aid under Chapter 70 and municipal appropriations used for that purpose. Excluded from the net school spending definition are expenditures for school transportation, school lunch, school construction and certain capital expenditures. Expenditures from federal funds and from school revolving accounts are also excluded.

As indicated in *Chart 5-1*, the recommended foundation budget target which is the ultimate spending goal for the district, has been increased from $122.3 million in FY94 to $162.7 million in FY98, a 33.0 percent increase. During this same time period, required net school spending, the amount the district must spend to move towards the foundation budget target, increased by 46 percent, from $107.1 million to $156.4 million. Actual net school spending increased by 44.1 percent, from $110.0 million to $158.5 million. Actual net school spending exceeds the requirement for each fiscal year shown, although the FY98 positive variance is only one-third of what it was in FY96. Worcester Public Schools are now at 97.4% of their foundation budget target, up from 89.9 percent in FY94.

Chart 5-1

Worcester Public Schools
Foundation Budget and Net School Spending (NSS)
(in millions of dollars)

	FY94	FY95	FY96	FY97	FY98
Foundation Budget Target	$122.3	$131.9	$146.0	$153.4	$162.7
Required NSS as % of Foundation	87.6%	87.2%	87.8%	93.0%	96.1%
Required NSS	$107.1	$115.0	$128.2	$142.7	$156.4
Actual NSS	$110.0	$121.3	$134.9	$144.0	$158.5
Variance $	$2.9	$6.3	$6.7	$1.3	$2.1
Variance %	2.7%	5.5%	5.2%	0.9%	1.3%
Actual NSS as % of Foundation	89.9%	92.0%	92.4%	93.9%	97.4%

Note: Data obtained from DOE

Chart 5-2 indicates that state aid, as a percent of actual net school spending, has increased from 51.3 percent in FY94 to 64.6 percent in FY98, while the local share has decreased from 48.7 percent in FY94 to 35.4 percent in FY98.

Chart 5-2

Worcester Public Schools
Net School Spending
(in millions of dollars)

	FY94	FY95	FY96	FY97	FY98
Required Local Contribution $	$50.7	$49.2	$50.9	$51.6	$54.0
Actual Local Contribution $	$53.6	$55.5	$57.7	$52.9	$56.1
Variance $	$2.9	$6.3	$6.8	$1.3	$2.1
Variance %	5.7%	12.8%	13.3%	2.5%	3.9%
Required NSS	$107.1	$115.0	$128.2	$142.7	$156.4
Actual Net School Spending	$110.0	$121.3	$134.9	$144.0	$158.5
Local Share $	$53.6	$55.5	$57.7	$52.9	$56.1
State Aid $	$56.4	$65.8	$77.3	$91.1	$102.4
Local Share %	48.7%	45.8%	42.7%	36.7%	35.4%
State Aid %	51.3%	54.2%	57.3%	63.3%	64.6%

Note: Data obtained from DOE

6. School Committee Program Budget

Within the context of education reform and improving student achievement, the audit team tries to establish what a school district budgets and spends on basic academic courses such as English and science versus other subjects or programs. Program budgets are generally intended to show the total financial resources for a particular program or activity. Well developed program budgets include goal statements, planned actions and expected outcomes along with the total amount of resources required to achieve the objectives. In the school environment, a program budget for mathematics, for example, would show salaries for mathematics teachers and related costs such as supplies, textbooks, etc. It would also indicate the expected outcomes for the budget year.

WPS is developing a program budgeting process for its school committee budget. WPS officials stated that the development of program budgeting has progressed. In school year 1995/96, 13 programs were identified. In 1996/97, 36 were presented and in 1997/98, 44 programs were presented. WPS officials plan for 56 programs in 1998/99 and 60 programs in 1999/2000. The Superintendent informed the audit team that development of a complete program budget is evolving and that it is his intention to produce one for the school committee by the year 2000.

Chart 6-1 summarizes the school committee budget for FY89, FY93, FY97 and FY98. For comparison purposes, the adjustments outlined in section 3 of this report are assumed. The school transportation budget has been excluded from Ordinary Maintenance to approximate net school spending.

According to *Chart 6-1*, teaching and non-teaching salaries increased from FY93 to FY97. As a percent, ordinary maintenance increased more than salaries.

Budgeted salary and ordinary maintenance items are detailed in *Appendix A-1*. Under salaries, there are major increases in teachers, instructional assistants, administration, custodians and miscellaneous. The miscellaneous salary account increased due to new and expanded programs. Ordinary maintenance adjusted for transportation shows major increases in instructional materials, personal services (includes staff/curriculum development and school performance awards), tuitions and miscellaneous. The miscellaneous expense account increased mainly due to new instructional equipment to implement WPS's technology plan.

Chart 6-1

Worcester Public Schools
School Committee Program Budget
(in millions of dollars)

	FY89	FY93	FY97	FY93-FY97 $ Incr.	FY93-FY97 % Incr.
Admin., Support & Plant Maintenance Salaries	$18.5	$17.7	$26.1	$8.4	47.5%
Teaching Salaries	$49.5	$55.9	$80.0	$24.1	43.1%
Employee Benefits	$12.1	$18.4	$18.1	($0.3)	-1.6%
Ordinary Maintenance	$8.8	$11.2	$18.2	$7.0	62.5%
TOTAL	$88.9	$103.2	$142.4	$39.2	38.0%

Note: Data obtained from WPS - school transportation budget not included

Chart 6.1.a shows the same data on a percentage distribution basis to illustrate how particular budget items have changed since FY89 and FY93 in certain areas.

Chart 6.1.a

Worcester Public Schools
School Committee Program Budget
Percentage Distribution

	FY89	FY93	FY97	Percentage Point Change FY89-97	Percentage Point Change FY93-FY97
Admin., Support & Plant Maintenance Salaries	20.8%	17.2%	18.3%	-2.5%	1.1%
Teaching Salaries	55.7%	54.2%	56.2%	0.5%	2.0%
Employee Benefits	13.6%	17.8%	12.7%	-0.9%	-5.1%
Ordinary Maintenance	9.9%	10.9%	12.8%	2.9%	1.9%
TOTAL	100.0%	100.0%	100.0%		

Note: Based on data obtained from WPS - school transportation budget not included

Chart 6-2 provides a further look at teachers' salaries by selected major disciplines. This chart, based on actual expenditures, indicates double-digit percent funding increases in all areas from FY93 to FY97 as well as increases through FY98. Elementary teachers' salaries increased by $8.3 million from FY93 to FY97, a 42.3 percent increase. Art and music teachers' salaries increased by over $1 million, or a 50.0 percent increase during this time period, from $2.2 million to $3.3 million.

Chart 6-2

Worcester Public Schools
Teaching Salaries Expenditures - Selected Disciplines
(in millions of dollars)

Discipline	FY89	FY93	FY97	FY93-FY97 $ Incr.	FY93-FY97 % Incr.
Certain Core Subjects	$8.3	$8.5	$11.7	$3.2	37.6%
Art and Music	$1.8	$2.2	$3.3	$1.1	50.0%
Instructional Media	$0.9	$0.5	$0.6	$0.1	20.0%
Physical Education	$1.5	$1.4	$1.9	$0.5	35.7%
SPED	$10.4	$12.1	$14.4	$2.3	19.0%
Elementary	$16.8	$19.6	$27.9	$8.3	42.3%
All Other Selected	$11.3	$11.2	$15.0	$3.8	33.9%

Note: Data obtained from WPS

Chart 6.2.a shows the same data on a percentage distribution basis to illustrate how teaching salary expenditures in selected areas have changed since FY89 and FY93.

Chart 6.2.a

Worcester Public Schools
Distribution of Teachers' Salaries - Selected Disciplines

Discipline	FY89	FY93	FY97	Percentage Point Change FY89-FY97	Percentage Point Change FY93-FY97
Certain Core Subjects	16.3%	15.3%	15.6%	-0.7%	0.3%
Art and Music	3.5%	4.0%	4.4%	0.9%	0.4%
Instructional Media	1.8%	0.9%	0.8%	-1.0%	-0.1%
Physical Education	2.9%	2.5%	2.5%	-0.4%	0.0%
SPED	20.4%	21.8%	19.3%	-1.1%	-2.5%
Elementary	32.9%	35.3%	37.3%	4.4%	2.0%
All Other Selected	22.2%	20.2%	20.1%	-2.1%	-0.1%
Total	100.0%	100.0%	100.0%		

Note: Data obtained from WPS

Teachers' salaries are detailed by major discipline in *Appendix A-2*. This Appendix, based on actual expenditures, details the double-digit percentage increases.

7. Foundation Budget

The foundation budget is a target level of spending developed to insure that a minimum level of education resources is available per student in each school district. The foundation budget shown in *Appendix B* is determined by a number of factors including enrollment, staffing, and salary levels. The key items in the foundation budget include: payroll; non-salary expenses; professional development; expanded programs; extraordinary maintenance; and books and instructional equipment. DOE calculates each of these budget items using the previous year's end-of-year pupil enrollment with adjustments for special education, bilingual and low-income students. Certain salary levels and full time equivalent (FTE) standards are used to calculate salary budgets which also include annual adjustments for inflation.

The foundation budget establishes spending targets by grade (pre-school, kindergarten, elementary, junior high and high school) and program (special education, bilingual, vocational and expanded or after-school activities). Grade and program spending targets are intended to serve as guidelines only and are not binding on local school districts. However, to encourage appropriate levels of spending, M.G.L. Ch. 70, §9 requires that a school district report to the Commissioner of Education when it has failed to meet foundation budget spending levels for professional development, books and instructional equipment, extended/expanded programs and extraordinary maintenance.

WPS spending in these areas for FY94, FY96, FY97 and the percentage of expenditures for foundation budgets for each year are shown in *Chart 7-1*. Expenditures did not reach foundation budget in any of the expenditure categories for the fiscal years shown. WPS did not file a report with the Commissioner's office as required by Ch.70, §9 for these three fiscal years nor did DOE direct WPS to submit such report. WPS officials indicated to the audit team that they were unaware of the reporting requirement.

Chart 7-1

Worcester Public Schools
Net School Spending
(in thousands of dollars)

	FY94		FY96		FY97	
	Actual	Budget	Actual	Budget	Actual	Budget
Professional Development	$104	$1,978	$683	$2,381	$1,997	$2,501
Books and Equipment	$1,154	$6,053	$4,941	$7,419	$7,233	$7,832
Expanded Program	$0	$2,563	$0	$3,251	$1,380	$3,388
Extraordinary Maintenance	$2,304	$3,817	$0	$4,595	$435	$4,826

Expenditures As Percentage of Foundation Budget

	FY94 NSS/FND	FY96 NSS/FND	FY97 NSS/FND
Professional Development	5%	29%	80%
Books and Equipment	19%	67%	92%
Expanded Program	0%	0%	41%
Extraordinary Maintenance	60%	0%	9%

Note: Data obtained from WPS

Appendix B shows the WPS foundation budget for FY94, FY96 and FY97. For each year, the chart shows expenditures and variances from the foundation budgets as well as how expenditures compare with the foundation budgets. The data indicates that salaries for teachers, assistants, principals, custodial, health staff, employee benefits, miscellaneous and SPED exceeded foundation targets. However, several items did not meet targeted foundation levels. Some of these areas include support staff, central office, expanded programs, athletics, extracurricular, books and equipment and extraordinary maintenance. In a discussion with the audit team, the Superintendent stated that his primary objective is to use funds for costs associated directly with the classrooms (teaching salaries, etc.)

8. Staffing - Full Time Equivalent (FTE) Trends

Since salaries and benefits comprise approximately 84 percent of the FY97 WPS school budget, budget changes closely reflect changes in staffing or FTEs. One of the major priorities of WPS is to keep student/teacher ratio as low as possible within budgetary constraints. It appears that WPS is reasonably successful in this area.

In FY89, the district had a total of 2,659 FTEs including 1,537 teachers. By FY93, these numbers had dropped to 2,444 and 1,468 respectively, as budget pressures forced reductions in staff. With the assistance of education reform, staffing has increased each year and by FY97, total FTEs reached 2,948, with 1,805 teaching FTEs. (In this context, teachers do not include other instructional staff such as supervisors or teaching aides.)

As *Chart 8-1* indicates, WPS went through a period of slight staff reductions between FY89 and FY93, reducing FTEs by 215 including 69 teaching positions. Due to increased state aid, staffing increased significantly, by 20.6 percent, between FY93 and FY97, as 504 FTEs including 337 teaching FTEs were added during this period. This addition of 337 teaching FTEs represented an increase of 23 percent from FY93 to FY97. This compares to a total student enrollment increase of 10.9 percent during this same time period.

Over the whole FY89 to FY97 period, schools in the district were able to increase staff by 10.9 percent, with the number of teachers rising by 17.4 percent, slightly higher than the enrollment increase of 14.3 percent.

Chart 8-1

Worcester Public Schools
Staffing Trends
Full Time Equivalent (FTE)

	Total FTE's	Teachers	Teachers % of FTE's	Instruct. Assists.	Administrators	All Others
FY89	2,659	1,537	57.8%	260	106	756
FY93	2,444	1,468	60.1%	245	89	642
FY97	2,948	1,805	61.2%	315	96	732
FY89-93	-215	-69	32.1%	-15	-17	-114
Increase / Decrease	-8.1%	-4.5%		-5.8%	-16.0%	-15.1%
FY93-97	504	337	66.9%	70	7	90
Increase / Decrease	20.6%	23.0%		28.6%	7.9%	14.0%
FY89-97	289	268	92.7%	55	-10	-24
Increase / Decrease	10.9%	17.4%		21.2%	-9.4%	-3.2%

Note: All others include such categories as clerical, custodians, cafeteria, etc.
Data obtained from WPS.

Chart 8-2 shows changes in teaching FTEs by type of school or program. The largest increase in teachers occurred in the elementary schools between FY93 and FY97, when 158 teachers were added, a 30.0 percent increase. High school and middle school teachers increased by 56 and 42 respectively, or 23.2 percent and 23.1 percent.

Chart 8-2

Worcester Public Schools
Teachers by Program
Full Time Equivalents
(excluding teaching aides)

	FY89	FY93	FY97	Increase 93-97	% Increase
Early Childhood	83	91	110	19	20.9%
Elementary (1-6)	530	527	685	158	30.0%
Middle (7-8)	218	182	224	42	23.1%
High School (9-12)	289	241	297	56	23.2%
System Wide Teachers	47	46	66	20	43.5%
Subtotal	1,167	1,087	1,382	295	27.1%
Bilingual	59	61	69	8	13.1%
ESL	21	20	25	5	25.0%
Special Education	290	300	329	29	9.7%
Total	1,537	1,468	1,805	337	23.0%

Note: ESL - English as a second language Data obtained from WPS

Student/teacher ratios follow a similar trend in all areas. They increased between FY89 and FY93, but then decreased between FY93 and FY97 as shown in *Chart 8-3*. The overall ratio for students to teachers was 13.5:1 in FY89. It increased to 14.6:1 in FY93, but dropped to 13.1:1 in FY97. When adjusted for the number of SPED, ESL and bilingual teachers, using the same total student population for illustration purposes, the resulting ratios would be somewhat higher as illustrated in the chart. This is due to larger student per teacher class ratios in regular day classes versus SPED, ESL and bilingual.

Chart 8-3

Worcester Public Schools
Students Per Teacher

	FY89	FY93	FY97
All Students/ All Teachers	13.5	14.6	13.1
All Students/ Non -SPED,ESL & Bilingual	17.8	19.7	17.2
Kindergarten	23.6	22.8	22.1
Elementary (1-6)	20.1	21.7	18.2
Middle	14.7	17.0	15.0
High School	15.8	17.6	16.0

Note: Teacher and student counts obtained from WPS

Teaching staff increased in certain core subject areas such as English, mathematics, science and social studies as shown in *Chart 8-4*. These increases are in line with the overall increase in teachers of 27 percent for the middle and high schools for the FY93 to FY97 period. Only science received significantly more teachers, 35.3 percent. FY97 staffing levels are higher than they were in FY89 for all subjects shown.

Chart 8-4

Worcester Public Schools
Teachers- Certain Core Subjects
High School and Middle School FTEs

	FY89	FY93	FY97	Increase 93-97	% Increase
English	67	58	72	14	24.1%
Mathematics	65	57	70	13	22.8%
Science	56	51	69	18	35.3%
Social Studies	52	49	62	13	26.5%
Total	240	215	273	58	27.0%

Note: Data obtained from WPS.

9. Payroll - Salary Levels, Union Contracts

Expenditures for salaries are reviewed to determine how the school district has increased expenditures for teachers and how teaching salaries have increased as a result of union contract agreements.

Chart 9-1 indicates how school salaries have increased in comparison to total school committee and municipal expenditures. As the chart indicates, WPS was able to increase its expenditures for total salaries by $31.6 million between FY93 and FY97, an increase of 44.3 percent, exceeding the overall spending increase of 36.4%. Total salaries made up 62.0 percent of expenditures in FY93 and 65.6 percent in FY97. Although teaching salaries increased by 42.5 percent over this period, they decreased slightly as a percentage of total school salaries from 71.4 percent in FY93 to 70.6 percent in FY97. These salary figures do not include fringe benefit expenditures.

Chart 9-1

Worcester Public Schools
Salary Expenditures Compared to Total Expenditures
(in millions of dollars)

	FY89	FY93	FY96	FY97	FY93-FY97 $ Incr.	FY93-FY97 % Incr.
Total School Committee and Municipal Expenditures	$97.6	$115.2	$146.2	$157.1	$41.9	36.4%
Total School Salaries	$67.2	$71.4	$97.3	$103.0	$31.6	44.3%
As % of Expenditures	68.9%	62.0%	66.6%	65.6%		
Teaching Salaries	$45.2	$51.0	$70.6	$72.7	$21.7	42.5%
As % of Total School Sal.	67.3%	71.4%	72.6%	70.6%		
Non-Teaching Salaries	$21.8	$20.4	$26.7	$30.3	$9.9	48.5%
As % of Total School Sal.	32.4%	28.6%	27.4%	29.4%		

Note: Data obtained from WPS

Chart 9-2 shows that the average teacher's salary increased from $35,667 to $41,888 between FY93 and FY97. The FY96 average teacher's salary of $41,642 is slightly above the statewide average teacher salary of $41,408 reported by DOE.

Chart 9-2

Worcester Public Schools
Teaching Salaries and Teachers (FTE)
Average Salary Comparison

	FY89	FY93	FY94	FY95	FY96	FY97
Teaching Salaries - $ mil.	$45.2	$51.0	$56.8	$62.2	$70.6	$72.7
FTE - Teachers	1,464	1,429	1,494	1,589	1,696	1,735
FTE Inc./Dec. from Previous Year		103	65	194	107	39
Average Salary per FTE	$30,874	$35,667	$38,021	$39,115	$41,642	$41,888
DOE Reported Statewide Average	N/A	$38,681	$39,012	$40,718	$41,408	N/A

* FTE excludes adult education teachers.
Note: Average salaries per FTE consist of all salaries, step increases, longevity and differentials (i.e., principals, advisors, coaches etc.). Data obtained from WPS and DOE End of Year

Of the additional $21.7 million spent on teaching salaries between FY93 and FY97 as shown in *chart 9-2a*, about $10.1 million or 47% was spent on new positions. Had increases been granted to staff in positions during FY93 at roughly the 3% rate of inflation, it would have cost $6.4 million or 30% of the additional increase. Another $5.1 million or 24% of the additional teaching salary expenditures went for increases above the 3% inflation rate mostly due to wage scales renegotiated with the union. Those increases ranged between 7.5% and 10.7% per year including step raises as shown in *chart 9-2b*.

Chart 9-2a

Worcester Public Schools
Salary Expenditures
Cost of New Positions and Salary Increases
(in millions of dollars)

	FY93	FY94	FY95	FY96	FY97	% of Cum. Incr.
Total Teaching Salary Exp.	$51.0	$56.8	$62.2	$70.6	$72.7	
Cumulative Increase from FY93		$5.8	$11.2	$19.6	$21.7	100%
Cost of 3% Inflationary Increase		$1.5	$3.1	$4.7	$6.4	30%
FY94-FY97 Cost of New Positions		$0.8	$3.4	$7.3	$10.1	47%
Subtotal		$2.3	$6.5	$12.0	$16.5	76%
Amount above 3% Annual Increase		$3.5	$4.7	$7.6	$5.1	24%

Note: Analysis based on data obtained from WPS

Chart 9-2b

Worcester Public Schools
Teachers' Salaries - Step and Contract Percent Increases

	1993	1994	Sep-94	1995	1996	1997	Total
Annual Contract Increase	0.0%	6.0%	2.0%	3.0%	4.0%	3.0%	18.0%
Step Increase	4.7%	4.7%	N/A	4.5%	4.5%	4.5%	22.9%
Totals	4.7%	10.7%	2.0%	7.5%	8.5%	7.5%	40.9%

Note: Data obtained from WPS

As shown in *chart 9-3*, a review of salary changes over the FY93 to FY97 period indicates that step 1 salary levels increased between 19 percent and 24 percent without including step increases or lane (degree level) changes. Also, effective January 1998, a step 12 has been added providing a three percent increase for the year and a one percent increase due to the additional step.

Overall, the cumulative salary increase for teachers excluding step raises was 19 percent from FY93 to FY97. This represents the minimum increase a full time teacher would receive exclusive of raises due to step changes or obtaining an advanced academic degree. In contrast, the state and local government implicit price deflator indicates about a 9.5 percent inflationary trend for the FY93 to FY97 period.

Over 65 percent of WPS teachers are currently at the highest step of their lane. That proportion has dropped from a high of 76 percent in FY94. In addition, the percentage of teaching staff hired on steps one through four for this same time frame increased from 5.4 percent to 13.7 percent.

Chart 9-3 shows how WPS's salary schedules might apply to a particular teacher for the period January 1, 1993 through January 1, 1997 depending on the step and academic degree. Various examples outline different situations. The chart illustrates so-called lane changes due to credit hours taken or degree earned such as BA to BA+15 and an MA to MA+15.

For example, as of 1/1/93, teacher A was on the maximum step 11 and had a BA. By 1/1/97, this teacher, on step 11, has received salary increases totaling to 19.3 percent. If this teacher had earned 15 additional credits and changed salary lanes to BA+15 during this period, the increase would have amounted to 23.4 percent.

Teacher B had a BA, step 7, on 1/1/93. On 1/1/97, this teacher is on step 11 and has received a salary increase of 42.9 percent. Had this teacher earned an additional 15 credits and changed to salary lane BA+15 during this period, the increase would have amounted to 47.8 percent.

Teacher C entered WPS with a BA at step 1 on 1/1/93. By 1/1/97, this teacher had reached step 5 and had received 49.4 percent increase in pay. By earning the next contract designation of a BA+15, the percent increase in salary would have reached 56.2 percent.

Chart 9-3

Worcester Public Schools
Teaching Staff
Step/Degree Summary - Selected Years

	FY93 Base Pay		FY97 Base Pay			FY93-97 % Change	
	Step	Base Pay	Step	Base Pay			
		BA		BA	BA +15	BA	BA +15
Teacher A	11	35,688	11	42,573	44,053	19.3%	23.4%
Teacher B	7	29,800	11	42,573	44,053	42.9%	47.8%
Teacher C	1	21,670	5	32,378	33,856	49.4%	56.2%
		MA		MA	MA +15	MA	MA +15
Teacher A	11	37,957	11	46,383	47,128	22.2%	24.2%
Teacher B	7	32,069	11	46,383	47,128	44.6%	47.0%
Teacher C	1	23,939	5	36,186	36,931	51.2%	54.3%

Note: BA - Bachelor of Arts degree, MA - Master of Arts degree
Data obtained from WPS

Chart 9-4

Worcester Public Schools
Teaching Salary Schedules
Comparison of FY93 and FY97 Salary Schedules - Steps 1 and 11

Salary	Initial Entry Level - Step 1					Highest Level - Step 11				
Lane	FY93	FY94	FY95	FY96	FY97	FY93	FY94	FY95	FY96	FY97
B	$21,670	$22,970 $23,430	$24,133	$25,098	$25,851	$35,688	$37,829 $38,568	$39,744	$41,333	$42,573
B + 15	$22,406	$23,750 $24,770	$25,513	$26,534	$27,330	$35,424	$38,609 $39,927	$41,125	$42,770	$44,053
MA	$23,939	$25,375 $26,883	$27,689	$28,797	$29,661	$37,957	$40,234 $42,039	$43,300	$45,032	$46,383
MA + 15	$24,480	$25,949 $27,558	$28,385	$29,520	$30,406	$38,498	$40,808 $42,714	$43,995	$45,755	$47,128
M + 30	$25,072	$26,576 $28,468	$29,322	$30,495	$31,410	$39,090	$41,435 $43,624	$44,933	$46,730	$48,132
CAGS	$25,883	$27,436 $29,525	$30,411	$31,627	$32,575	$39,901	$42,295 $44,681	$46,021	$47,862	$49,298
D	$26,683	$28,284 $30,570	$31,487	$32,747	$33,729	$40,701	$43,143 $45,728	$47,098	$48,982	$50,451

Note: BA - Bachelor of Arts Degree, MA - Masters Degree, MA+30 Masters Degree plus additional credits, D. - Doctoral Degree
In calendar year 1994 the union contract provided for two salary raises; January 1, 1994 and 1994
Data obtained from WPS

The audit team examined managerial staff contracts for positions such as the Superintendent, deputy superintendent, quadrant managers and school building principals. Starting salaries for school principals are based on the type of school, the school enrollment level and their professional experience. All contracts state that annual salary increases are based on

performance and range from zero percent to four percent based on the recommendation of the quadrant manager.

Before FY96, the Worcester teachers' contract included principals in a section entitled administrative positions. At that time, principals worked under letters of employment, but since then one, two and three year contracts have been negotiated with various principals. Under the contracts, future annual salary increases will be based upon positive performance evaluations by the Superintendent.

10. Professional Development Program

DOE requires school systems to prepare a professional development plan and to meet minimum spending requirements for professional development. WPS has a comprehensive professional development plan detailing objectives, activities, resource requirements and timelines. WPS's Office of Staff Development prepared the plan in conjunction with the staff development council consisting of teachers, administrators and community members.

Certain professional development courses are required or may be required for certain teachers. For example, if a principal evaluating the performance of a teacher determines that the teacher needs professional development in teaching methods, the principal would require the teacher to take the Skillful Teacher course. This course is available every semester through Fitchburg State College. All teachers and administrators must take two other courses: World of Difference, which addresses multi-culturalism; and Dimensions of Learning; which addresses various aspects of teaching. Courses are offered during the school year and during the summer. During the summer of 1998, WPS is offering 56 courses for the staff. WPS prints and distributes brochures to all staff outlining the course offerings.

In the survey of teachers conducted for the audit, 92 percent indicated they had participated in professional development in 1996/97. In addition, 86 percent believed that WPS had an adequate professional development program and 88 percent indicated that the program was designed to meet school needs and tied to the new frameworks and assessments.

During FY95 and FY96, DOE required school districts to spend at a rate equivalent to $25 per pupil for professional development. This requirement increased to $50 per pupil for FY97. WPS met the minimum requirement for FY96 and FY97, but not for FY95. *Chart 10-1* identifies professional development spending as reported by WPS compared to DOE spending requirements. *Chart 10-2* shows a sample of courses offered, the number of Professional Development Points (PDP's) earned for each course and the number of attendees.

Chart 10-1

Worcester Public Schools
Expenditures for Professional Development
(in whole dollars)

	Staff Development	Minimum Spending Requirement	Total Spent as % of Requirement
FY94	$103,547	N/A	
FY95	$330,514	$564,200	59%
FY96	$682,898	$585,475	117%
FY97	$1,997,382	$1,186,400	168%

Note: Data obtained from WPS and DOE

Chart 10-2

Worcester Public Schools
Selected Professional Development Offerings 1996/97

Title	PDP's	Attendance
Non-Violent Crisis Intervention Part 1	6	206
A World of Difference-New Teacher	6	159
Teaching Pro-Social Behavior	7	81
NEASC Accreditation	20-45	72
Introduction to the Myers-Briggs Type	2	72
Second Step: A Violence Prevention Curr.	6	69
Non-Violent Crisis Intervention	6	63
Community Building - Implementing Frameworks as a Team	5	60
Status of American Education Today	5	49
Pupil Personnel Services Staff Training	4	48
Anti Racial Adoptee Issues	4.5	48
Skillful Teacher Training	45	42
Making the Most of Middle School Challenges	3	40
Developing an Effective Writing/Thinking Prog.	15	39
Mathematics: NCTM Standards	10	28
A Conversation On Inclusion	2	28
Skillful Teacher for Administrators	45	16

Note: Information obtained from WPS

11. School Improvement Plans

M.G.L. Chapter 71, §59C mandates that each school have a school council which must develop a school improvement plan and update it annually. For the purpose of this audit, the audit team reviewed 18 WPS school improvement plans. This review included plans for the four high schools, the four middle schools and ten elementary schools.

WPS has not only met the requirements of the law, but it is evident that it takes the planning process seriously and the process is well designed and administered. WPS has implemented a planning process with specific vision and mission statements, measurable goals, action steps and timetables. From the employee survey, it is evident that teachers are very clear about district and school goals and objectives and that WPS measures progress towards meeting these goals.

School councils initially prepared the plans in the 1995/96 school year. Plans cover a three year cycle with annual updates ensuring continuity from year to year. The centrally prepared instructions for the plans are clear and contain specific standards. Every plan must conform to these standards. The plans include two mandatory goals: to improve student attendance and to improve parental involvement. A third goal is voluntary. For example, a third goal may be to improve school facilities.

At the end of the 1996/97 school year, each school prepared an annual update, or "Summary Progress Report" identifying the status of all previous action steps. The "Summary Progress Report" also indicates the three major outcomes that will occur in the next year. For example, "Student attendance will improve", "Academic achievement levels of students will improve (MEAP, MCAS, MAT)" or "Inclusion and integration of IEP students into regular classes continues to accelerate." In addition, the report reviews quality outcome measures such as attendance, suspension rates, MEAP scores, dropout rates and parental involvement. The quadrant manager reviewed these reports with each principal to assess how they have contributed to raising student achievement and parental involvement and education.

The Superintendent required a supplement to the School Improvement Plans in February 1998. The supplement was an MCAS action plan, identifying how the school was preparing the students to take the MCAS. The supplement follows the same format as the regular school improvement plan detailing action steps, identifying individuals responsible for the action steps and listing criteria for success.

12. Time And Learning

Time and learning standards refer to the amount of time students are expected to spend in school, measured by the number of minutes or hours in a school day and the number of days in the school year. As of September 1997, DOE requires 990 instruction hours per year for both the middle and high schools and 900 hours of instruction for the elementary schools. The school year remains at 180 days per year. As noted in *Chart 12-1*, WPS time and learning

plan exceeds these standards by six hours for the high and middle schools and by 30 hours for the elementary schools. There is no requirement for kindergarten.

Chart 12-1

Worcester Public Schools
Time and Learning Standards

	1995/1996 WPS Standard		1997/1998 DOE Req.	1997/1998 WPS Standard	
	Hours Per Year	Minutes Per Day	Hours Per Year	Hours Per Year	Minutes Per Day
High School	942	314	990	996	332
Middle School	942	314	990	996	332
Elementary School	930	310	900	930	310
Kindergarten	930	310	N/A	930	310

Note: Data obtained from WPS

WPS instituted extended-day schools six years ago. Nine schools have extended days, which are about forty-five minutes longer than days at other schools.

13. Courses and Class Sizes

Chart 13-1 summarizes selected high school class sizes for 1997/98 based on 1st term actual enrollment. The school's average enrollment in certain core subject sections was 22 or less students per class. English, mathematics and science had average class sizes of 20 students, while Social Studies had an average of 21 students. All core subjects had sections with at least 25 students and in addition, several had sections with 30 or more. Both Doherty and Burncoat high schools had significantly more class sections with 30 or more students than the other high schools.

Chart 13-1

Worcester Public Schools
High School Classes
1997-98 School Year

Subject	School	Number of Sections	Total Enrollment	Avg. Enroll. Per Section	Sect. w/ 25-29	Sect. w/ 30 or more	30+ %
English	Doherty	61	1282	21	15	1	1.6%
	North	36.5	721	20	6	1	2.7%
	South	53	1049	20	6	0	0.0%
	Burncoat	48	1009	21	11	4	8.3%
	Total	198.5	4061	20	38	6	3.0%
Math	Doherty	64	1410	22	20	4	6.3%
	North	33.5	689	21	7	0	0.0%
	South	48	866	18	4	1	2.1%
	Burncoat	44	864	20	7	2	4.5%
	Total	189.5	3829	20	38	7	3.7%
Science	Doherty	50	1091	22	16	2	4.0%
	North	33	644	20	7	1	3.0%
	South	46	782	17	1	0	0.0%
	Burncoat	39	790	20	13	0	0.0%
	Total	168	3307	20	37	3	1.8%
Social Studies	Doherty	53	1141	22	13	2	3.8%
	North	32	718	22	11	3	9.4%
	South	42	858	20	8	0	0.0%
	Burncoat	40	871	22	12	3	7.5%
	Total	167	3588	21	44	8	4.8%

Note: Data obtained from WPS. Chart based on 1st Term Active Enrollment

14. Technology and Computers

DOE approved WPS's Technology Plan on October 22, 1996. The plan was the work product of a "technology team" consisting of staff, teachers, students and community members. The "Vision Statement for Technologies" for WPS outlines a strategy utilizing technologies which will support a challenging, integrated curriculum based on Goals 2000, National Standards, the Massachusetts Common Core of Learning and the State Frameworks. There are currently 2,850 computers in the school district, or one computer for every eight students.

WPS developed a five year implementation plan to improve technology for the years 1996 to 2000. "Each principal prepared a school-based technology plan which has become part of the

district's implementation plan." The plans were reviewed by both quadrant managers and a technology review team. Estimated to cost $15.9 million over 5 years, this figure includes capital costs such as renovation of electrical wiring. Many of the city's schools are considered to need improvements to the infrastructure to accommodate up-to-date technology. According to the five year plan, there will be annual technology upgrades.

According to the plan, WPS is committed to connecting every computer throughout the school system to the Internet and to all other computers in the system. In addition, it is envisioned that every teacher will have a computer. WPS is in the second year of the plan. It intends to work on thirteen schools per year until all schools have an internal network allowing every computer to be connected to the system.

Another aspect of technology used in WPS is the video cable channel (channel 11) dedicated to the school system. The school system uses this system as a communication device for students, parents and the community at large. Some of the offerings are:

- Homework Hotline
- Satellite Town Meeting: Preparing Classrooms for the Future
- School Safety
- Homework Helper
- Preparing Young Children for School Success
- All school committee meetings

The Homework Hotline is for various courses such as English, Language Arts and Number Sense and Estimation. Students can call the studio, where a teacher of that subject will answer their questions.

At the North High School, Data General Corporation donated a computer laboratory including all the computers and ancillary equipment. In addition, Data General trained and then paid students to do all the wiring. At no cost to WPS, Data General's effort provides a good example of a successful school-business partnership to benefit students.

15. Supplies and Textbooks

The audit team reviewed the status of supplies and textbooks by several methods:

- by reviewing expenditures in both WPS budget and in DOE end-of -year report as detailed in *Chart 15-1*;
- by conducting on-site inspections of textbooks;
- by interviewing several WPS staff, and
- by examining FY97 invoices from major publishing houses.

The school district's annual budget provides an amount for instructional materials including textbooks, instructional supplies, library collections and periodicals, workshops to enhance staff instructional effectiveness, certain components of the technology plan and capital

acquisition. This budget item has an individual school allocation of $110 per pupil in FY98, up from $60 per pupil in FY95, $70 per pupil in FY96 and $100 per pupil in FY97. WPS plans to spend $115 per pupil in FY99.

Chart 15-1 shows expenditures for textbooks and instructional equipment, and for textbooks only. The chart reveals a fairly consistent increase in each of these categories. FY93 includes $413,000 of textbook expenditures from Equal Education Opportunity Grant funds. FY95 was exceptional as a $586,000 salary surplus was transferred to this area. Although staff members told the audit team that the level of textbooks was adequate, WPS was below the foundation budget for Books and Instructional Equipment in fiscal years 1995 through 1997.

Chart 15-1

Worcester Public Schools
Textbooks and Instructional Equipment Expenditures
(in thousands of dollars)

							FY93-FY97	
	FY89	FY93	FY94	FY95	FY96	FY97	$ Incr.	% Incr.
High School	$37	$45	$76	$235	$278	$330	$285	633.9
Middle School	$26	$32	$70	$186	$241	$322	$290	894.8
Elementary	$102	$147	$332	$738	$666	$839	$692	470.3
SPED	$21	$3	$32	$61	$9	$11	$8	260.0
Bilingual	$11	$10	$11	$4		$14	$4	43.8
Systemwide	$106	$265	$4	$778	$157		($265)	
Total	$303	$502	$525	$2,002	$1,351	$1,515	$1,014	202.2
Textbooks Only inc. EEOG:	$197	$650	$510	$1,172	$1,192	$1,338	$688	105.9
Textbooks & Instr. Equipment / Student:	$15	$23	$24	$89	$58	$64	$40	172.6
Textbooks / Student:	$9	$30	$23	$52	$51	$56	$26	85.7

Note: Data obtained from WPS - totals may not add due to rounding. FY95 included a $586,000 salary surplus transferred to textbooks.

Associated with every principal's goal of assuring that "daily instructional practice is aligned with the state curriculum frameworks" is a requirement that each principal "implement a plan for textbook acquisition." Both the quadrant manager and the supervisor of staff and program development monitor WPS's five year textbook replacement plan. Although the replacement plan is not formalized, it appears to be understood and accepted by the quadrant managers and principals.

Site visits revealed that students are using the newly purchased textbooks in the classroom. Older textbooks are kept and used as a resource at the discretion of the teacher. In some

instances, they may contain a clearer explanation of a particular subject matter or the students may take them home to complete an assignment.

16. Test Scores

Since improving test scores is a main theme at WPS, principals and teachers are expected to generate improvement in this area. If one uses MEAP scores to measure the success of WPS in this regard, clearly the effort has been successful. WPS's test scores are generally below the state average, but have been improving significantly over recent years. WPS has clearly focused on improving test scores, addressing areas of academic weakness as measured by tests and providing help to individual students as deemed necessary and appropriate.

SAT scores for 1996 were 909, less than the state average of 1011. The Massachusetts Educational Assessment Program (MEAP), the state's educational testing program from 1988 to 1996, showed that WPS scores increased significantly in all four subject matter areas in grades 4 and 8. Results from the 1997 statewide Iowa tests indicate that 70 percent of WPS 3rd graders scored at the higher reading skill levels of "proficient" and "advanced", only slightly below the statewide average of 75 percent for these skill levels. WPS's 10th graders scored at the 45th percentile in the achievement test when compared to a representative national sample of students. [See Appendices C and D]

Scholastic Aptitude Tests (SAT)

SAT scores are below the state average as shown in *Chart 16-1*. Scores from 1994 and 1995 cannot be compared to 1996 scores since SAT scores were "recentered" in 1996 resulting in a higher score for that year for all schools and consequently, a higher state average.

Chart 16-1

Worcester Public Schools
Scholastic Aptitude Test (SAT) Results

	1994		1995		1996	
WPS SAT Scores	WPS	State Avg.	WPS	State Avg.	WPS	State Avg.
Verbal	377	426	374	430	459	507
Math	426	475	419	477	450	504
Total	803	901	793	907	909	1011
WPS - % of State Avg.	89.1%		87.4%		89.9%	

Note: Data obtained from WPS and DOE

Massachusetts Educational Assessment Program (MEAP)

An analysis of Worcester's MEAP scores is in *Appendix D*. MEAP scores are reported in two ways: scaled scores, which range from 1000 to 1600; and proficiency levels which are reported as percentage of students in each proficiency. Level 1 is the lowest, level 2 is considered the "passing grade" level, while levels 3 and 4 constitute the more advanced levels of skills.

Proficiency scores shown in *Chart 16-2* indicate that WPS 4th graders improved significantly in all levels. WPS also made significant improvement in reducing the percentage of 8th grade students in level 1 or below while increasing the percentage of 8th grade students in level 2.

Chart 16-2

Worcester Public Schools
MEAP Proficiency Scores
1992 - 1996 Fourth and Eighth Grades

	1992			1996		
Fourth Grade	Level 1 or Below	Level 2	Levels 3 & 4	Level 1 or Below	Level 2	Levels 3 & 4
Reading	50%	34%	17%	37%	37%	25%
Mathematics	55%	34%	12%	31%	50%	19%
Science	57%	29%	14%	31%	47%	22%
Social Studies	52%	32%	15%	33%	46%	21%
	1992			1996		
Eighth Grade	Level 1 or Below	Level 2	Levels 3 & 4	Level 1 or Below	Level 2	Levels 3 & 4
Reading	57%	22%	21%	40%	37%	23%
Mathematics	67%	17%	16%	49%	38%	13%
Science	60%	20%	19%	49%	34%	17%
Social Studies	62%	19%	18%	49%	34%	17%

Note: Data provided by DOE

Between 1988 and 1996, MEAP scores for students in Grades 4 and 8 increased significantly in all four subject matter areas. Grade 10 scores improved significantly in three of the four areas. In fact, between 1992 and 1996, WPS Grade 4 MEAP scores increased 70 points in reading, 90 points in mathematics, 110 points in science and 90 points in social studies. Variations of 50 points or more are considered statistically significant. The MEAP scores for all grades tested are shown in *Appendix C*.

To accomplish these increases, WPS instituted a series of activities entitled MEAP Preparation in Worcester Public Schools. Their goal was to improve MEAP test scores by improving student skills and knowledge in academic areas. MEAP preparation activities included test

analysis, changes to curriculum and instruction techniques, staff development, test wiseness activities (knowing how to take a test).

WPS has recently developed a Diagnostic Preparation Process based on various principles such as "assessment is inside curriculum and instruction", and "tests and data should be used to diagnose and to help". In this process, the curriculum is aligned with the state curriculum frameworks. Teachers assess students' knowledge and skills using multiple choice and open ended test questions. Tests are analyzed to identify student weaknesses in certain academic areas. Using these analyses in conjunction with test guides and technology software, WPS staff will teach and reteach targeted content and skill areas until the student achieves mastery of the content or skills.

Chart 16-3 shows reading scores for the 4th grade for selected school districts whose scores in 1988 fell between 1200 and 1260 as compared to Worcester's 1230 score. The scores for 4th grade students are particularly significant, because by 1996, these students had experienced education reform initiatives in the early stages of formal education. The greatest impact of education reform should initially be seen in the performance of these students. The average MEAP scores for WPS grade 4 students have shown significant improvement in all four subject matter areas over the five administrations of the test.

Chart 16-3

MEAP READING SCORES - 4TH GRADE
Selected Communities with 1988 Scores from 1200-1260

	1988	1990	1992	1994	1996	1992-1996 Change
Truro *	1260	1270	1440		1460	20
Kingston	1260	1380	1410	1390	1420	10
Provincetown *	1260	1270	1440	1370	1400	-40
Tewksbury	1260	1310	1330	1320	1380	50
Methuen	1260	1230	1260	1300	1370	110
Edgartown *	1260	1330	1360	1380	1340	-20
Oak Bluffs *	1260	1330	1360	1380	1340	-20
Tisbury *	1260	1330	1360	1380	1340	-20
Acushnet	1260	1280	1280	1320	1310	30
Ludlow	1260	1310	1320	1330	1300	-20
Webster	1260	1270	1290	1320	1300	10
Greenfield	1260	1310	1290	1290	1290	0
Up Island *	1260	1330	1360		1290	-70
Winchendon	1260	1230	1290	1310	1230	-60
Wareham	1250	1280	1320	1360	1350	30
Holbrook	1250	1260	1280	1300	1330	50
North Adams	1250	1240	1290	1280	1310	20
Taunton	1250	1270	1310	1320	1310	0
Gill-Montague	1250	1270	1250	1310	1300	50
Essex *	1250	1330	1380	1380	1290	-90
Fitchburg	1250	1270	1250	1260	1220	-30
Dartmouth	1240	1330	1320	1300	1360	40
Malden	1240	1290	1280	1320	1310	30
Quincy	1240	1280	1320	1330	1310	-10
Worcester	**1230**	**1260**	**1280**	**1300**	**1350**	70
Medford	1230	1280	1290	1330	1310	20
Southbridge	1230	1210	1220	1260	1310	90
Haverhill	1230	1250	1310	1310	1280	-30
Springfield	1230	1200	1200	1230	1230	30
Brockton	1220	1220	1210	1220	1200	-10
Chicopee	1210	1240	1250	1270	1270	20
Ware	1210	1300	1230	1310	1260	30
Lynn	1210	1200	1230	1230	1240	10
Somerville	1200	1200	1260	1300	1290	30
New Bedford	1200	1220	1270	1320	1270	0
Cambridge	1200	1220	1240	1260	1230	-10
Lowell	1200	1210	1220	1210	1180	-40
State Average	**1300**	**1300**	**1300**	**1300**	**1350**	**50**

A significant change in a score is considered to be 50 points in one direction or another.

*signifies a small school district whose scores may vary significantly and are not as reliable due to the size of the test sample.

Iowa Tests

The Iowa Test of Basic Skills (Iowa tests) for the 3rd grade was administered throughout Massachusetts in the spring of 1997. WPS's overall total percentile rank in reading for all students tested under routine conditions was 57 - below the statewide score of 65. The test defines four different levels of reading comprehension: pre-reader, basic reader, proficient reader and advanced reader. Pre-readers and basic readers made up 30 percent of tested students while proficient and advanced readers made up 70 percent of all students who were tested in WPS. About 83 percent of the tested students have attended WPS since the first grade.

WPS staff expressed the view that although some students may not achieve the same average score statewide, they can and do make progress toward the statewide average. Effort is made to have all students improve their scores. WPS has applied a Cohort Analysis approach to the Grade 3 Iowa tests. This approach uses pre and post tests for the same students during the same time period. Ten schools conducted the tests to ascertain whether students showed improvement during the 1997/98 school year. In the fall of 1997, the Iowa tests, Form K, were administered to those ten schools whose Grade 3 students tested, on average, at or below the 44th percentile in the previous spring's administration of the tests. Grade 3 teachers, using individual reports and class item analysis from this fall testing, identified those reading skills which students needed to improve. Teachers tested these same students again in the spring of 1998 using Form M, which is similar to Form K. The ten elementary schools demonstrated positive growth in reading skills. According to WPS staff, Cohort Analysis assesses the same students at two points of time and shows what students have learned, where a grade analysis reports the achievement of different grade students and shows what students know.

The Iowa Test of Educational Development, also referred to as the Massachusetts Grade 10 Achievement Test, was also administered in the spring of 1997. It tested seven different areas of skills including reading, quantitative thinking, social studies, etc. Scores were based on a national sample of students who took the test. WPS's 10th graders scored at the 45th percentile compared to the national sample. WPS's performance compares to scores as high as the 89th percentile and as low as the 28th percentile for other Massachusetts school districts.

17. Hiring and Evaluation of Teachers and Principals

Hiring Process

WPS uses both a contractual transfer process and a long term substitute process to fill projected teaching vacancies. If neither of these processes results in a teaching appointment, the position can then be filled with a person hired from outside the school system. The human resource manager screens and sends candidates to the principal for an interview. The principal makes a recommendation to the human resource manager who sends a letter offering the position to the chosen candidate.

WPS advertises vacancies for principals to current staff as well as in regional and national media. Interested candidates must be state certified for the position of principal.

The principal selection process involves a two part rating system worth a maximum of 185 points. A panel of trained individuals from the schools and the community rates the training and experience part, up to 85 points. A panel consisting of administrators, teachers, parents/community representatives evaluates the candidate's ability in an interview where a candidate can gain up to 100 points. The Superintendent then selects the principal from the top three candidates willing to accept the position. A similar process is in place for the hiring of administrators.

Evaluation Process

There is an evaluation process in place for principals, administrators and teachers.

Principals and Administrators

During September and October, the principals meet with the quadrant managers to set goals for the year. The quadrant manager conducts two formal observations as well as informal observations during the school year. All principals are evaluated by June 1st. At the end of the year, the quadrant manager and the principals hold a formal conference. Commendations and recommendations from the quadrant manager are based on a summary report of goals, a written review based on DOE's Principles of Effective Administrative Leadership and supporting evidence supplied by the principal. The quadrant manager then makes a recommendation to the Superintendent. At the conclusion of the evaluation, one of the following three recommendations is checked:

- continuation in present position;
- continuation with consultant team assistance; or
- removal.

Twenty-one principals have been appointed since education reform went into effect. Of these 21 principals, WPS has removed three from their positions.

The system uses a similar process to evaluate administrators.

Teachers - The evaluation process for teachers was negotiated as part of the union contract. The contract stated that the school committee and the association appointed a joint subcommittee to review teacher and administrative evaluation procedures, criteria and instruments. By April 1996, these evaluations had been negotiated by the Education Association of Worcester (EAW). Since September of 1996, teachers have been setting goals and objectives as part of their evaluation process. These are consistent with systemwide goals and objectives The teacher discusses evaluative criteria, goals, and objectives with the principal or designee before October 31st. Visits to the classroom to observe a teacher's performance in the classroom may be planned or unannounced. Teachers with professional

status have a three year cycle of evaluation. Part one includes a comprehensive evaluation, called a Summative Evaluation, based on DOE's Principles of Effective Teaching, while parts two and three consist of a Formative goal setting evaluation for improvement and growth promotion over a two year period. The evaluator and evaluatee mutually select three or four goals identified for improvement over a two year period. Principals observe teachers at least twice and write reports of their performance. Teachers may also choose to evaluate their own progress or to have a peer evaluation. A full evaluation can occur whenever the principal/evaluator deems it necessary.

A checklist is used to recommend teachers for: continual employment, additional classroom observations, appropriate staff development courses, a Resource Team, or dismissal. The Resource Team consists of a group of three to five teachers/administrators group chosen from appropriate curriculum and administrative areas. Each teacher has a separate Resource Team. The Team's purpose is to improve instruction in the classroom. Some suggestions as to how the Resource Teacher may be helpful are: demonstrating good teaching techniques; suggesting methods of evaluating the work of pupils; helping the teacher set up realistic goals or arranging for the teacher to visit and observe other teachers. WPS has averaged two Resource Teams per year for the last four years. For example, in FY96, Resource Teams monitored three teachers. Each showed improvement and was rehired.

Certified staff without professional status are to be observed two times per year with evaluations to be completed by May 31st. Evaluators base a comprehensive review on the same Principles of Effective Teaching and evaluatees receive a Summative Evaluation.

For the 1996/97 school year, 1,930 teachers were evaluated. Of these, 346 were teachers without professional status who received a Summative Evaluation. Of the remaining 1,584 active teachers with professional status, one third received a Summative Evaluation, one third received a Formative Evaluation in year two status, and one third received a Formative Evaluation in year three status. This was part of the new evaluation process that went into effect at the start of the 1996/97 school year.

Since education reform, WPS has used this process to remove 42 teachers without professional status and to dismiss three teachers with professional status.

The following areas and performance measures are used in the evaluation instrument of WPS teachers:

Areas of Evaluation

Currency in the curriculum:

Up to date regarding curriculum content
Careful and definite planning based on needs of students
Development of lessons

Effective planning and assessment of curriculum and instruction:

Effective assessment of student learning

Effective monitoring of student's understanding of curriculum
Adjusts instruction, materials, or assessments when appropriate

Effective management of classroom environment:
Appropriate standards of behavior, mutual respect and safety are maintained

Effective instruction:
Learning goals are clear to students
Appropriate instructional techniques are used
Effective use of technology and instructional strategies are used to increase student learning and confidence to learn
Promotion of high standards and expectations for student achievement
Learning goals, high standards, and expectations are communicated to students
Student responsibility for achieving the goals of the curriculum are increased

Promotion of equity and appreciation of diversity:
Teacher strives to ensure equitable opportunities for student learning
Teacher demonstrates appreciation and sensitivity to diversity

Fulfillment of professional responsibilities:
Interactions with parents are cooperative and constructive
Teacher is a reflective and continuous learner
Teacher shares responsibility for goals and priorities of grade/team/department school and district

18. Accounting and Reporting

The audit team traced a sample of expenditures reported to DOE to WPS accounting and budget records of the business manager. The audit team also met separately with several WPS staff, the city auditor and a representative of the CPA firm which audits the city.

There appears to be a good working relationship between the city and school offices. Both offices utilize the same computer accounting software package. WPS relies on an inventory control system maintained by the city.

The audit team was satisfied that adequate safeguards exist for proper internal controls and that, based upon the sample, expenditure reports were an accurate representation of WPS expenditures.

An annual audit of the school district is included in the citywide audit. The school district does not have a separate financial audit. The Comprehensive Annual Financial Report (CAFR) contains the city's audit. The Government Finance Officers Association of the United States and Canada has awarded Worcester the Certificate of Achievement for Excellence in Financial Reporting for its CAFR annually since FY93. Only a few Massachusetts municipalities hold this certificate which represents a high form of recognition in government accounting and financial reporting. Neither the FY97 CAFR nor the audit's management letter gave specific comment or recommendation regarding WPS. The internal control review and compliance

audit, in accordance with the Federal Office of Management and Budget's Circular A-133, was in draft form at the time of our audit.

The audit team noted that the school committee has not been approving bills and payrolls before the city auditor's office receives them. WPS informed the audit team that this process has been the same for years. The DLS has ruled that even after the passage of education reform, the school committee remains the head of the school department for approving bills and payrolls under M.G.L. Ch.41,§§41 and 56. These sections may arguably be superseded by city charter, but our inquiry into the city's law department found no such charter language. The audit team found sufficient offsetting controls to mitigate the potential of inappropriate expenditure of funds including the city auditor's expenditure review, quarterly school committee and finance subcommittee reports on expenditures and weekly reports to the Superintendent toward the end of the fiscal year. By law, the school committee has fiscal oversight responsibility. We therefore suggest that WPS and City of Worcester review this process.

The city of Worcester does not concur with DOR's position on this issue.

19. Review of Expenditures

The audit team completed a review of WPS expenditures and purchasing controls and analyzed the accounting system and selected accounts from the General Ledger for FY97. The review showed that purchasing procedures and controls are in place and are utilized. The review process encompassed accounts of vendors who have done business with WPS. The ledgers and individual vendor files were reviewed.

During the expenditure review, a series of invoices relating to food services was reviewed. Specifically, one vendor supplied food services for WPS functions during FY97 in excess of $17,600, detailed on over 70 individual invoices. These functions ranged from retirement receptions to school committee meetings and Worcester Educational Association meetings. It was noted that 36 percent of these expenditures were charged to cost centers for professional development, 21 percent to food supplied at school committee meetings, 14 percent for the Worcester House of Correction painting project at the East Middle school and 11 percent for Superintendent meetings.

WPS paid the City of Worcester police department a total of $120,000 for police services inclusive of DARE programs. Six city police officers are assigned to WPS duties.

20. High School Accreditation

All high schools are accredited. The accreditation visits for the schools took place from 1989 to 1991. WPS has submitted required interim status reports due two years and five years after the initial accreditation reports are issued. The next visits are scheduled for 1999 through 2001. *Chart 20-1* identifies the status of accreditation for each high school.

Chart 20-1

Worcester Public Schools
Status of High Schools' Accreditation
June 30, 1998

High School	Latest Review	Latest Update	Date of Accreditation	Status
North	Oct. 2, 1991	Sept. 27, 1993	May 1, 1996	Accredited
South Community	Oct. 31, 1990		July 26, 1995	Accredited
Burncoat	May 26, 1989	Feb. 29, 1996	April 15, 1994	Accredited
Doherty Memorial	Mar. 17, 1991		Feb. 18, 1998	Accredited

Note: Data obtained from WPS

Some of the steps taken to continue the accreditation of the high schools are:

High School	Action Steps
Burncoat	Completion of 100% of the recommendations contained in the evaluation report
Burncoat	Steps taken to make curriculum guides more specific through the inclusion of course texts, related software, and varied instructional activities
Doherty Memorial	The hiring of a full-time media assistant to support increased media services for students and the faculty
Doherty Memorial	Increases in the number of computers and CD-ROMs for student use in the media center
South Community	The system's appointment of eleven curriculum specialists to develop curriculum on a system-wide basis
South Community	The establishment of an extended day program
North	The establishment of a ninth grade interdisciplinary team which includes flexible scheduling and teacher planning time

North	The development and implementation of a plan to utilize test results to formulate goals, assess and address curriculum issues, plan individual students instruction, analyze areas of growth, and increase parental involvement in students' academic growth

21. Grade 3 Transiency

Student transiency is generally defined as the percentage of students who enter and/or leave the system after the first day of school. Transiency poses an educational problem because students may lose the benefit of a sequential and coherent school program as they move from school to school. Worcester has a relatively stable student population in the lower grades as measured by the 1997 3rd grade Iowa reading test. Results from that test are categorized by students who have taken the test under routine conditions. Students who did not take the test or were given extra time to finish the test are excluded.

Of a selected number of urban school districts and districts previously audited shown in *Chart 21-1*, it is evident that WPS has the fifth highest percentage of 3rd graders who attended WPS in grades 1, 2 and 3. Worcester's stable population percentage of 82.6 percent is above the statewide average of 80.3 percent. Worcester's transiency percentage of 17.4 percent is below the statewide average of 19.7 percent.

Chart 21-1

Transiency and Stability - 3rd Grade
Selected School Districts
Student Population Participating in the Iowa 3rd Grade Reading Test

	Stable Population	Total Population	Stable Population Percent	Transiency Percent
Fall River	725	815	89.0%	11.0%
Waltham	247	289	85.5%	14.5%
Newton	710	833	85.2%	14.8%
Lexington	369	433	85.2%	14.8%
Worcester	**1,278**	**1,547**	**82.6%**	**17.4%**
Framingham	425	516	82.4%	17.6%
Lowell	690	840	82.1%	17.9%
Cambridge	462	563	82.1%	17.9%
Brockton	891	1,100	81.0%	19.0%
Lynn	751	931	80.7%	19.3%
New Bedford	822	1,023	80.4%	19.6%
Malden	279	358	77.9%	22.1%
Springfield	1,139	1,466	77.7%	22.3%
Somerville	300	388	77.3%	22.7%
Quincy	437	568	76.9%	23.1%
Chicopee	353	468	75.4%	24.6%
Lawrence	498	664	75.0%	25.0%
Triton	186	252	73.8%	26.2%
Boston	2,560	3,735	68.5%	31.5%
Statewide	**52,247**	**65,046**	**80.3%**	**19.7%**

Note: Student population includes only students tested under "routine" conditions.
Data obtained from DOE's 1997 Third Grade Iowa Reading Test Report.

22. Special Education and Transitional Bilingual Education

Special Education (SPED)

In 1997, Worcester had a special education participation rate of 17.1 percent, 0.6 percent higher than the state average of 16.5 percent reported by DOE. Total SPED enrollment in the 1990's has averaged around 4,200 students and has decreased slightly since 1994. As a percentage of the total enrollment, the SPED enrollment has shown a decrease. The number of students who fall into the substantially separate categories has also decreased since 1994. This is due mostly to increased use of inclusion models for SPED students.

Chart 22-1

Worcester Public Schools
SPED Enrollment
Based on October 1, Reports

School Year Ending	Total Enrollment	Total SPED	SPED As % of Total Enrollment	Substantially Separated	Substantially Separated as % of SPED
1991	21,062	4,097	19.5%	1,606	39.2%
1992	21,052	4,316	20.5%	1,681	38.9%
1993	21,404	4,329	20.2%	1,619	37.4%
1994	21,924	4,421	20.2%	1,707	38.6%
1995	22,568	4,258	18.9%	1,338	31.4%
1996	23,419	4,084	17.4%	1,064	26.1%
1997	23,728	4,066	17.1%	1,018	25.0%
1998	23,965	4,275	17.8%	1,015	23.7%

Note: Data obtained from WPS

The increase in SPED costs from FY93 to FY97 was $10.4 million, or 53.6 percent, while the increase in total school spending as reported to DOE for the same period was 36.4 percent. For FY97, SPED expenditures were 19 percent of total school spending reported to DOE. For FY93, this amount was 16.3 percent.

Chart 22-2

Worcester Public Schools
School Committee Expenditures as Reported to DOE
(in millions of dollars)

	FY89	FY93	FY97	FY93-97 Inc / Dec	% Inc./ Dec
Special Education	$18.8	$19.4	$29.8	$10.4	53.6%

Note: Data obtained from WPS

Transitional Bilingual Education (TBE)

WPS provides Bilingual Services to 2,200 linguistic students, of which some 1,150 are enrolled in the Transitional Bilingual Education Program. This represents 4.9 percent of WPS enrollment. TBE was budgeted at $3.6 million in FY93 and $5.7 million in FY97. This is an increase of $2.2 million, or 62.6 percent, more than the overall 36.4 percent increase in total school spending for that period. TBE enrollment reached a high of 1,245 for the FY95 year and has decreased slightly since then to 1,150 in the 1997 school year. The average TBE budget amount per student was $5,035 in FY97.

The TBE program has a goal of mainstreaming students in three years. *Chart 22-3* indicates the students mainstreamed each year over the past five years. This appears to be approximately 15 percent of the TBE enrollment as of October each year. Taking into account that students enter and leave the program during the year, the mainstreaming percentage has ranged from a low of 11.8 percent in FY93 school year to a high of 17.9 percent in the FY97 school year, still below the 33 percent rate one would expect to meet the three year mainstreaming goal.

Chart 22-3

Worcester Public Schools
Transitional Bilingual Education (TBE)
(from October Report)

School Year Ending	Enrollment All Students	Enrollment in TBE	TBE %	Number of Students Mainstreamed
1993	21,404	1,098	5.1%	130
1994	21,924	1,116	5.1%	175
1995	22,568	1,245	5.5%	237
1996	23,419	1,210	5.2%	163
1997	23,728	1,150	4.8%	206

Note: Data obtained from WPS

23. Dropout and Truancy

The program for drop-out and truancy prevention in WPS begins in the elementary schools because it is believed that students who will potentially drop out of school tend to show certain early characteristics such as high rates of mobility, truancy, and often lag behind their peers academically. WPS works with the State Department of Social Services and case managers are assigned to work with these students to determine whether any state service is needed in each student's case.

Truants are more likely to drop-out of school than students with good attendance records. WPS believes that tracking, reporting and working with chronic truants is a process which will reduce the number of drop-outs. WPS has a rule that, unless rare circumstances exist, it will not promote a student with sixteen or more absences in one year. Rare exceptions are granted for chronic illness and other situations which the student cannot control. Students with more than 16 absences may attend summer school. In their meetings with principals, quadrant managers review truancy rates which are tracked throughout the year. A "Non-Graduate Exit Protocol" has been established for students who drop-out or are identified as having a high probability of dropping out. Teachers or other school staff refer the student to a guidance counselor.

For high school students there are many alternative programs which attempt to identify and address reasons for dropout. For example, there is the Work-Based Career Development Program which allows students to attend school and leave during the day to go to work. The Teen Care Programs allow school-age mothers to continue their education. The Downtown Campus Program is for students having difficulty in the traditional school setting. A team of administrators, guidance and faculty assess students on their individual performances. The Woodward Day School serves students who have been excluded from regular school for serious discipline violations. These are just a few of the many programs WPS offers as alternative education.

WPS has 41 adjustment counselors assigned to the elementary schools to work with students who appear at risk of eventually dropping out. *Chart 23-1* identifies Worcester's drop-out rates for the last five years in comparison to the state average, the average of the fifteen largest communities and the state median. Worcester has made significant efforts to address the drop-out problem in its schools but has been less successful in this area than other urban communities.

Chart 23-1

High School Drop-out Rates
Selected Urban Communities
FY 93-97

Community	FY93	FY94	FY95	FY96	FY97
Lawrence	14.0%	13.8%	8.6%	6.4%	10.4%
New Bedford	10.7%	9.1%	9.5%	9.2%	9.0%
Boston	7.6%	7.5%	8.1%	7.2%	8.4%
Worcester	**7.4%**	**8.5%**	**7.9%**	**7.4%**	**6.8%**
Somerville	5.7%	7.5%	7.8%	5.9%	6.5%
Brockton	9.0%	8.3%	8.4%	7.3%	5.7%
Springfield	10.2%	6.6%	11.6%	3.0%	5.0%
Fall River	8.7%	6.7%	6.1%	8.1%	4.6%
Lynn	7.1%	9.3%	7.2%	7.2%	4.3%
Framingham	3.2%	3.2%	3.6%	2.5%	3.8%
Waltham	2.8%	3.8%	3.4%	5.1%	3.1%
Lowell	3.1%	3.3%	2.8%	2.6%	3.1%
Cambridge	4.0%	3.3%	4.2%	3.0%	2.0%
Quincy	1.7%	1.5%	1.0%	1.0%	1.5%
Newton	0.4%	1.1%	1.0%	0.7%	1.0%
Average Urban Comm's	6.4%	6.2%	6.1%	5.1%	5.0%
Median Urban Comm's	7.1%	6.7%	7.2%	5.9%	4.6%
State Average	3.5%	3.7%	3.6%	3.4%	3.4%

Note: Data provided by DOE

24. Maintenance and Capital Improvement

The audit team made site visits to several schools and to administrative buildings in the district. We found commonly used areas of certain school buildings less than well kept. By this, we mean that floors appeared to be poorly cleaned and in one case, trash was clearly obstructing the corridor used by students between classes. In another instance, the odor of sewage permeated a stairwell leading to the basement where student labs are located. We recognized that visits coincided with the end of the school year. However, since building cleanliness is a factor of school accreditation, we advise WPS to review cleanliness standards.

WPS receives capital improvement funding from the city for several purposes: capital equipment; major renovations; long-range school building construction planning, and special circumstances.

WPS requests capital equipment funding annually during the budget process. The city has added about $500,000 per year for several years to the school department's budget for this purpose.

Renovation funding is based upon a 5 year city commitment to provide $2 million annually. The current 5 year period ends in FY98. The new city manager, appointed during this period, continued the city's commitment. WPS uses this funding for purposes such as rehabilitating boilers, replacing roofs, removing underground tanks, and installing piping and venting.

A committee chaired by the Superintendent approves long-range school building construction plans which the school committee reviews and accepts and forwards to the city manager. The city manager and Superintendent mutually agree on how to proceed with the plan depending upon city resources and other prioritizing factors. It is then presented to the City Council for borrowing authorizations.

The current long-range plan includes over $225 million in school replacements and upgrades as follows:

- Replace five elementary schools (two recently opened, three scheduled to open September 1999);
- Replace vocational school;
- Replace one high school;
- Renovate one middle school;
- Convert one high school to a middle school;
- Add to one middle school.

Since Worcester operates its schools under an approved desegregation plan, the school district qualifies for the state reimbursement rate of 90 percent for capital projects.

As a special circumstance, the city is currently funding renovations to the school administration building separately from other capital funding. The city has provided $4.8 million for this purpose.

25. Curriculum Development

Curriculum development began at WPS in 1993 with the establishment of steering committees in the various disciplines with frameworks implemented in the 1996/97 school year. The committees included teachers, administrators, community members and students. Curriculum committees consisted of administrators, teachers (pre-K through 12), bilingual and SPED teachers from every quadrant. Each committee developed a mission statement, vision and philosophy. They developed policy statements and drafted learning objectives. Each objective started with the statement, "Students will" because the curriculum was based on student achievement. The plan included staff development for all teachers to acquaint them with the objectives of the plan and integrated the technology plan. When the state curriculum frameworks were established, they were easily incorporated into WPS frameworks (many of which were based on national standards) because several WPS staff served on DOE committees. Every elementary teacher and librarian as well as secondary teachers in that particular subject area received a copy of the state frameworks and the district curriculum.

The curriculum includes a gifted and talented program for advanced students, an enrichment program after normal school hours. and a program called "curriculum compacting", which brings various subjects together to eliminate redundancy and accelerated programs for each quadrant.

26. Performance Based Awards Program

WPS has special legislation to establish a revolving fund for a performance based awards program. Schools in WPS (high schools, middle schools, and elementary schools) can apply for an award to fund a certain project. If approved, the school receives a maximum of $20,000 to complete the project. The funds may not be used to augment salaries. There are three kinds of projects funded through this program:

- Student Participation in School which includes:
  - Dropout reduction (high schools)
  - Student retention (elementary schools)
  - Student attendance (all schools)
  - Student suspensions (middle and high schools);

- School Outreach to the Community which includes:
  - Business Partnerships
  - College and university partnerships
  - Community involvement
  - Family/volunteer involvement; and

- Curriculum and Professional Development initiatives to improvement student academic performance

All applications must identify a direct relationship between the proposed program and improvement in student achievement as evidenced by test scores.

IV. Employee Survey

The audit team conducted a confidential survey of all employees of WPS to provide a forum for teachers and staff to express their opinions on education in WPS. Approximately 3,700 questionnaires were delivered to school staff and 1,507 responses were received and tabulated, a response rate of 41 percent. Areas covered by the survey include:

1. education reform;
2. education goals and objectives;
3. curriculum;
4. planning;
5. communications and mission statements;
6. budget process;
7. professional development;
8. supplies;
9. facilities; and
10. computers and other education technology.

Appendix E shows the teachers' answers to the survey questions. The Superintendent also received a summary of responses.

The survey results confirm that education reform is taken seriously in Worcester. Eighty-one percent of teachers think that education reform issues are considered when their own school plans are made and 77 percent think that also applies to district wide plans. Eighty-eight percent believe that the school district is taking positive steps to improve education and 76 percent state that their job has changed because of education reform.

Teachers are very clear about the school district's goals and objectives (92 percent) and how they relate to their jobs (87 percent). Eighty-five percent feel that they have a role in developing their own goals and objectives and 87 percent confirm that there are indicators used to measure their progress toward their goals and objectives.

The survey also indicates that 61 percent of the teachers do not think that an increase in school funding is tied directly to improvements in education. Forty-five percent of teachers think that the improvements in education at the school would have occurred without education reform.

Teachers are very positive about curriculum development in Worcester. Eighty-two percent believe that the curriculum is coherent and sequential. Eighty-five percent feel that there is a

coherent, on-going effort within WPS to keep curriculum current. However, only 66 percent feel that teachers play an important role in reviewing and revising the curriculum. They are also less positive that the curriculum now in use in their school will improve student test scores. Only 61 percent believe it will, while 31 percent think it will not. More than half, 60 percent, believe that the curriculum does not impact test scores as much as how a subject is taught by a teacher.

V. Superintendent's Statement - Education Reform

As part of this review, the Superintendent was asked to submit a brief statement expressing his point of view with respect to three areas:

1. school district progress and education reform since 1993
2. barriers to education reform
3. plans over the next three to five years.

The Superintendent's statement is included in *Appendix F*.

VI. Appendix

Appendix A1	School Committee Program Budget
Appendix A2	Teachers' Salaries by Discipline
Appendix B1	Foundation Budget Line Items Targets and Expenditures FY94, FY96-FY97 - Table
Appendix B2 - 3	Foundation Budget Line Items Targets and Expenditures FY94, FY96-FY97 - Graph
Appendix C	Mass. Educational Assessment Program (MEAP) Summary prepared by DOE
Appendix D1 - 3	Mass. Educational Assessment Program (MEAP) Summary Scores for Grades 4, 8 and 10 prepared by DOE
Appendix E	Employee Survey Results
Appendix F	Superintendent's Statement on Education Reform Accomplishments, Barriers and Goals

Worcester Public Schools
School Committee Budgets
(in thousands of dollars)

			FY89 - FY93			FY93 - FY97		
Salaries:	**FY89**	**FY93**	**$ Incr.**	**% Incr.**	**FY97**	**$ Incr.**	**% Incr.**	**FY98**
Administration	$5,043	$5,078	$35	0.7%	$6,832	$1,754	34.5%	$7,146
Teachers	$49,477	$55,864	$6,387	12.9%	$80,035	$24,171	43.3%	$86,163
LT Subs	$378	$0	($378)	-100.0%	$0	$0		$0
School Committee	$53	$47	($6)	-11.3%	$47	$0	0.0%	$47
Day by Day Subs	$423	$270	($153)	-36.2%	$393	$123	45.6%	$540
Home Instruction	$65	$34	($31)	-47.7%	$34	$0	0.0%	$34
Instructional Assts.	$2,276	$2,935	$659	29.0%	$4,497	$1,562	53.2%	$4,727
Coaches	$228	$190	($38)	-16.7%	$284	$94	49.5%	$327
Bus Monitors	$280	$304	$24	8.6%	$503	$199	65.5%	$516
Misc.	$731	$928	$197	26.9%	$2,424	$1,496	161.2%	$2,956
Crossing Guards	$274	$314	$40	14.6%	$374	$60	19.1%	$392
Supv. Attendance	$135	$0	($135)	-100.0%	$0	$0		$0
Custodians	$3,207	$2,986	($221)	-6.9%	$4,079	$1,093	36.6%	$4,332
Custodians OT	$321	$300	($21)	-6.5%	$550	$250	83.3%	$572
School Plant	$1,086	$815	($271)	-25.0%	$1,111	$296	36.3%	$1,389
School Plant OT	$67	$55	($12)	-17.9%	$155	$100	181.8%	$161
Admin Clerical	$2,077	$1,487	($590)	-28.4%	$1,979	$492	33.1%	$2,131
Support OT	$54	$43	($11)	-20.4%	$93	$50	116.3%	$100
School Clerical	$1,098	$1,088	($10)	-0.9%	$1,336	$248	22.8%	$1,425
Non-Inst Support	$722	$875	$153	21.2%	$1,379	$504	57.6%	$1,567
Unemploymt. Comp	$188	$100	($88)	-46.8%	$100	$0	0.0%	$100
Health Insurance	$7,917	$13,705	$5,788	73.1%	$12,362	($1,343)	-9.8%	$12,674
Workers' Comp	$863	$944	$81	9.4%	$899	($45)	-4.8%	$874
Retirement	$3,090	$3,604	$514	16.6%	$4,737	$1,133	31.4%	$5,030
Total Salary:	**$80,053**	**$91,966**	**$11,913**	**14.9%**	**$124,203**	**$32,237**	**35.1%**	**$133,203**

Worcester Public Schools
School Committee Budgets
(in thousands of dollars)

			FY89 - FY93			FY93 - FY97		
Ordinary Maint.:	**FY89**	**FY93**	**$ Incr.**	**% Incr.**	**FY97**	**$ Incr.**	**% Incr.**	**FY98**
Transportation	$2,998	$3,150	$152	5.1%	$4,854	$1,704	54.1%	$5,227
Out of State Travel	$0	$5	$5		$10	$5		$10
Library OM	$44	$275	$231	525.0%	$0	($275)	-100.0%	$0
Travel Agric	$0	$0	$0		$0	$0		$0
Athletics	$110	$110	$0	0.0%	$142	$32		$160
Personal Services	$307	$191	($116)	-37.8%	$1,193	$1,002	524.6%	$1,345
Equipment Rental	$146	$16	($130)	-89.0%	$4	($12)	-75.0%	$4
Tuition	$3,200	$3,718	$518	16.2%	$5,037	$1,319	35.5%	$5,300
Printing & Postage	$125	$121	($4)	-3.2%	$160	$39	32.2%	$186
Textbooks	$210	$825	$615	292.9%	$0	($825)	-100.0%	$0
Instr. Materials	$436	$950	$514	117.9%	$3,104	$2,154	226.7%	$3,754
Misc OM	$376	$395	$19	5.1%	$2,418	$2,023	512.2%	$2,681
Vehicle Maint.	$120	$130	$10	8.3%	$195	$65	50.0%	$217
Fuel	$1,452	$1,681	$229	15.8%	$1,995	$314	18.7%	$2,134
Electricity & Gas	$756	$1,161	$405	53.6%	$1,093	($68)	-5.9%	$1,128
Telephone	$211	$125	($86)	-40.8%	$165	$40	32.0%	$198
Building Repair	$202	$310	$108	53.5%	$1,186	$876	282.6%	$1,011
Suppl. Construction	$159	$150	($9)	-5.7%	$1,032	$882	588.0%	$1,252
Suppl. Cleaning	$110	$110	$0	0.0%	$310	$200	181.8%	$315
Misc. Sch. Plant	$743	$640	($103)	-13.9%	$22	($618)	-96.6%	$22
In State Travel	$0	$65	$65		$78	$13	20.0%	$80
Building Insurance	$139	$60	($79)	-56.8%	$79	$19	31.7%	$73
Total Ord. Maint.:	**$11,844**	**$14,188**	**$2,344**	**19.8%**	**$23,077**	**$8,889**	**62.7%**	**$25,097**
GRAND TOTAL:	**$91,897**	**$106,154**	**$14,257**	**15.5%**	**$147,280**	**$41,126**	**38.7%**	**$158,300**

Note: Data obtained from WPS

Worcester Public Schools
Teachers Salaries by Selected Discipline
(in thousands of dollars)

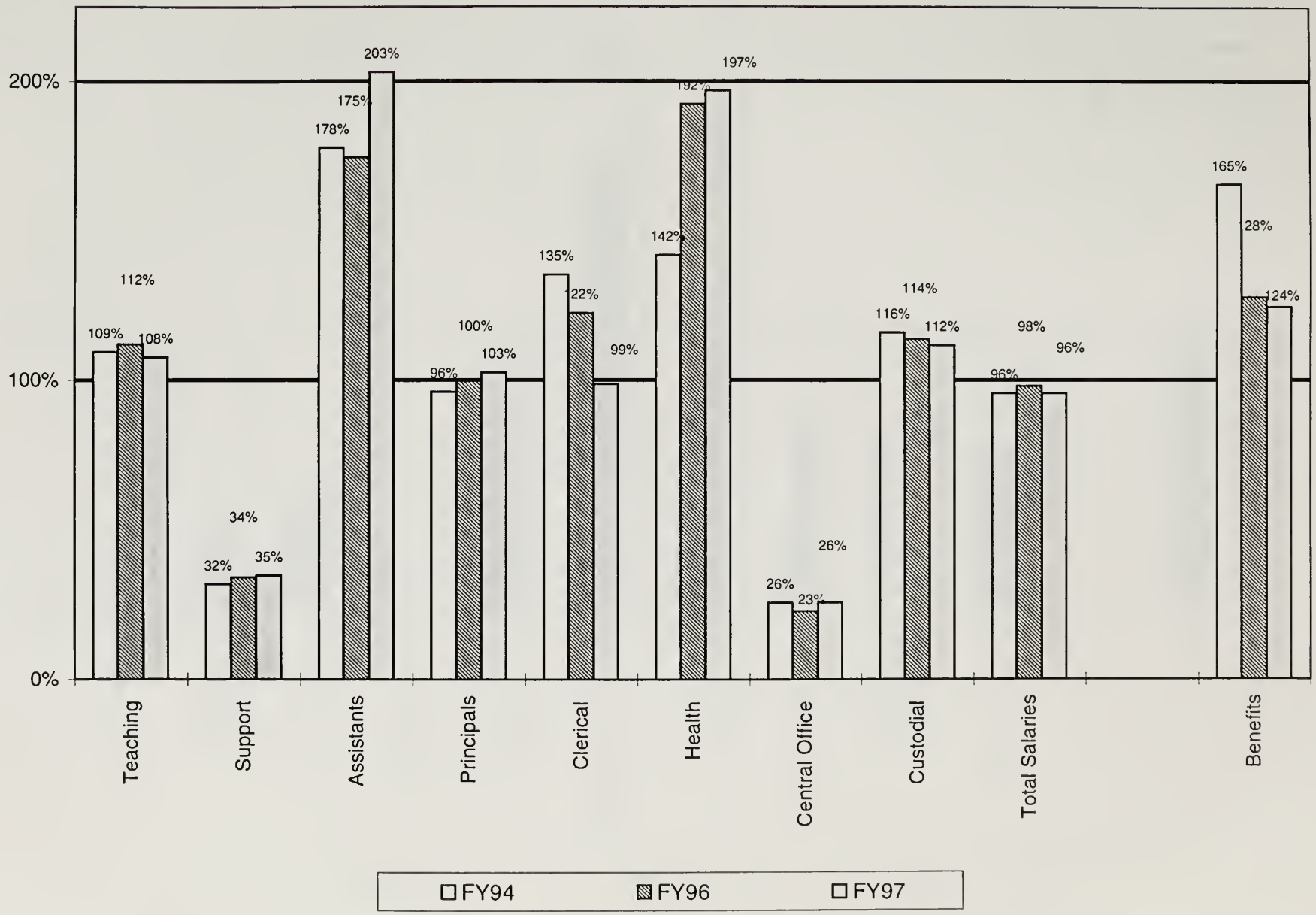
Discipline	FY89	FY93	FY93-FY97			FY93-FY98			FY97-FY98	
			FY97	$ Incr.	% Incr.	FY98	$ Incr.	% Incr.	$ Incr.	% Incr.
Elementary	$16,761	$19,642	$27,901	$8,259	42.0%	$29,255	$9,613	48.9%	$1,354	4.9%
English	$2,308	$2,260	$3,083	$823	36.4%	$3,147	$887	39.2%	$64	2.1%
Mathematics	$2,321	$2,395	$3,136	$741	30.9%	$3,389	$994	41.5%	$253	8.1%
Science	$1,891	$1,987	$2,953	$966	48.6%	$3,189	$1,202	60.5%	$236	8.0%
Social Studies	$1,799	$1,906	$2,559	$653	34.3%	$3,087	$1,181	62.0%	$528	20.6%
Foreign Language	$1,187	$1,186	$1,753	$567	47.8%	$2,091	$905	76.3%	$338	19.3%
Business	$819	$667	$857	$190	28.5%	$802	$135	20.2%	($55)	-6.4%
Art	$842	$1,074	$1,613	$539	50.2%	$1,889	$815	75.9%	$276	17.1%
Music	$971	$1,142	$1,643	$501	43.9%	$1,953	$811	71.0%	$310	18.9%
Home Economics	$768	$724	$992	$268	37.0%	$1,026	$302	41.7%	$34	3.4%
Physical Education	$1,489	$1,438	$1,906	$468	32.5%	$2,236	$798	55.5%	$330	17.3%
Reading	$1,637	$769	$890	$121	15.7%	$968	$199	25.9%	$78	8.8%
Industrial Arts	$987	$878	$1,169	$291	33.1%	$1,253	$375	42.7%	$84	7.2%
Health	$317	$448	$777	$329	73.4%	$875	$427	95.3%	$98	12.6%
Bilingual	$1,723	$2,248	$2,745	$497	22.1%	$2,962	$714	31.8%	$217	7.9%
ESL	$690	$752	$1,081	$329	43.8%	$1,169	$417	55.5%	$88	8.1%
SPED	$10,415	$12,133	$14,371	$2,238	18.4%	$15,116	$2,983	24.6%	$745	5.2%
Guidance	$1,650	$1,703	$2,068	$365	21.4%	$2,186	$483	28.4%	$118	5.7%
Psych & Adj Couns.	$1,507	$1,804	$2,686	$882	48.9%	$2,869	$1,065	59.0%	$183	6.8%
Instructional Media	$920	$530	$617	$87	16.4%	$666	$136	25.7%	$49	7.9%

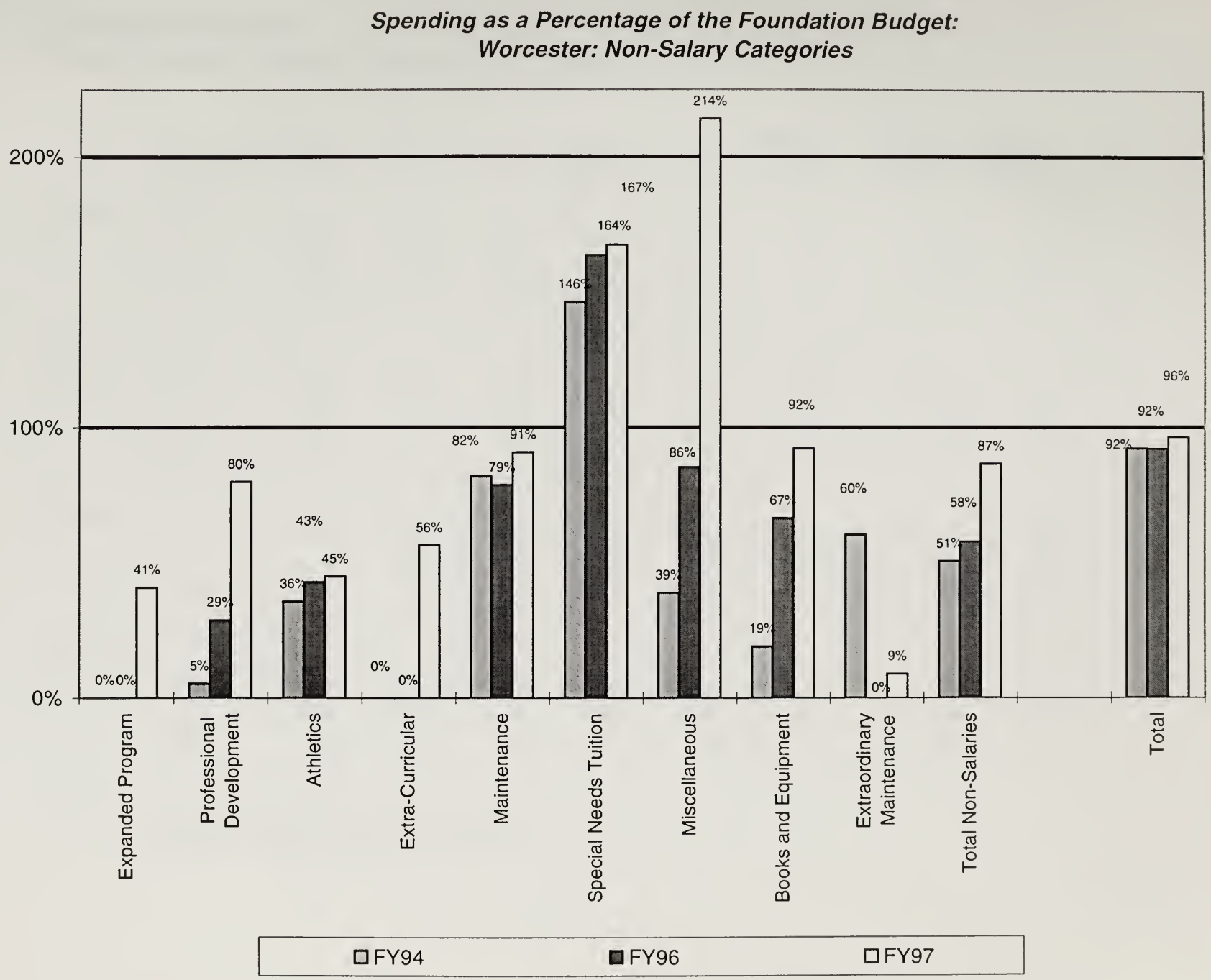
Note: Data obtained from WPS

Worcester Public Schools
Net School Spending According to Foundation Budget Categories
(in thousands of dollars)

	Reported Expenditures			Foundation Budget			Variance Expend. over(under) Foundation		
	FY94	FY96	FY97	FY94	FY96	FY97	FY94	FY96	FY97
Teaching Salaries	$57,472	$71,319	$71,988	$52,534	$63,664	$66,843	$4,937	$7,654	$5,145
Support Salaries	$4,243	$5,343	$5,722	$13,400	$15,701	$16,521	($9,158)	($10,357)	($10,799)
Assistants' Salaries	$3,826	$4,483	$5,498	$2,153	$2,569	$2,708	$1,672	$1,914	$2,790
Principals' Salaries	$3,972	$4,676	$5,064	$4,134	$4,693	$4,933	($162)	($17)	$130
Clerical Salaries	$3,311	$3,414	$2,897	$2,447	$2,791	$2,935	$864	$624	($38)
Health Salaries	$1,300	$2,036	$2,193	$917	$1,059	$1,114	$383	$977	$1,079
Central Office Salaries	$1,008	$1,033	$1,227	$3,943	$4,528	$4,765	($2,935)	($3,496)	($3,538)
Custodial Salaries	$5,027	$5,940	$6,127	$4,338	$5,221	$5,485	$689	$719	$642
Total Salaries	$80,157	$98,245	$100,714	$83,866	$100,227	$105,303	($3,709)	($1,982)	($4,589)
Benefits	$19,270	$17,861	$18,298	11,659	13,999	$14,715	$7,611	$3,862	$3,584
Expanded Program	$0	$0	$1,380	$2,563	3,251	$3,388	($2,563)	($3,251)	($2,009)
Professional Development	$104	$683	$1,997	$1,978	2,381	$2,501	($1,875)	($1,698)	($504)
Athletics	$424	$500	$549	$1,190	1,171	$1,225	($766)	($671)	($676)
Extra-Curricular	$0	$0	$396	$632	666	$702	($632)	($666)	($306)
Maintenance	$4,697	$5,614	$6,817	$5,733	7,135	$7,508	($1,036)	($1,521)	($691)
Special Needs Tuition	$4,071	$4,656	$4,985	$2,782	2,844	$2,978	$1,290	$1,812	$2,007
Miscellaneous	$770	$1,943	$5,118	$1,985	2,272	$2,390	($1,215)	($329)	$2,728
Books and Equipment	$1,154	$4,941	$7,233	$6,053	7,419	$7,832	($4,899)	($2,478)	($599)
Extraordinary Maintenance	$2,304	$0	$435	$3,817	4,595	$4,826	($1,513)	($4,595)	($4,392)
Total Non-Salaries	$13,523	$18,337	$28,910	$26,732	$31,734	$33,350	($13,209)	($13,397)	($4,440)
							$0		
Total	$112,950	$134,443	$147,923	$122,258	$145,961	$153,368	($9,307)	($11,517)	($5,446)
Revenues	$69	$13	$17				$69	$13	$17
Net School Spending	$112,882	$134,430	$147,906	$122,258	$145,961	$153,368	($9,376)	($11,531)	($5,462)

Spending as a Percentage of the Foundation Budget: Worcester: Salaries and Benefits




Spending as a Percentage of the Foundation Budget:
Worcester: Non-Salary Categories
200%
100%
0%
0%
0%
41%
5%
29%
80%
36%
43%
45%
0%
0%
56%
82%
79%
91%
146%
164%
167%
214%
39%
86%
19%
67%
92%
60%
0%
9%
51%
58%
87%
92%
92%
96%
Expanded Program
Professional Development
Athletics
Extra-Curricular
Maintenance
Special Needs Tuition
Miscellaneous
Books and Equipment
Extraordinary Maintenance
Total Non-Salaries
Total
FY94
FY96
FY97

Worcester Public Schools
Mass. Educational Assessment Program (MEAP) Scores

	Grade	1988	1990	1992	1994	1996	1988-96 Change	*1996 State Average*	WPS vs State Avg.
Reading									
	4	1230	1260	1280	1300	1350	120	*1350*	0
	8	1200	1220	1220	1260	1310	110	*1380*	-70
	10	NA	NA	NA	1220	1240		*1310*	-70
Math									
	4	1230	1260	1280	1300	1370	140	*1330*	40
	8	1200	1230	1220	1220	1270	70	*1330*	-60
	10	NA	NA	NA	1210	1250		*1310*	-60
Science									
	4	1230	1250	1270	1330	1380	150	*1360*	20
	8	1210	1240	1230	1220	1270	60	*1330*	-60
	10	NA	NA	NA	1220	1260		*1310*	-50
Social Studies									
	4	1240	1260	1280	1310	1370	130	*1340*	30
	8	1200	1230	1210	1240	1280	80	*1320*	-40
	10	NA	NA	NA	1210	1250		*1300*	-50

Notes: Test was not given to all grades in all years as indicated by NA
Data obtained from Mass. Department of Education

MEAP SCORES - WORCESTER

The Massachusetts Educational Assessment Program was a biennial curriculum assessment that tested reading, mathematics, science and social studies at grades 4, 8 and 12 in 1988; in 1994 the secondary grade tested was moved from grade 12 to grade 10. The last administration of this program was 1996. The purpose of MEAP was twofold: to provide data for comparisons; and to provide schools and districts with information that could be used to improve curriculum and instruction.

MEAP reports scores in two ways: scaled scores which range from 1000 to 1600; and proficiency levels which are reported as percentages of students in each level. In 1988, the state average for the scaled scores was determined to be 1300 in all subjects. In subsequent administrations, the state average has risen. Scaled scores are relative to the state average and allow for longitudinal comparisons as well as comparisons between districts. Open-ended question results account for 30% of the total scaled score; multiple choice questions account for the remaining 70% of the scaled scores. A change of fifty or more points in a scaled score is considered educationally significant. This means that there is a noticeable difference in the behaviors and responses of students in a classroom.

In 1992, MEAP began to use proficiency levels as another means of reporting test results. Proficiency levels are descriptive statistics based on external absolutes--the proficiency levels are not relative to other proficiency levels in the state, but based on how students perform relative to external criteria. The proficiency levels range from Below Level 1 (which means that the student did not answer the questions so we do not have enough information on which to make a judgement) to Level 4, the highest level.

GRADE 4

Scaled Scores

- The scaled scores for fourth grade reading increased steadily across the five administrations of the test in Worcester starting with 1230 in 1988 and closing with 1350 in 1996. The highest scaled score attained was 1350 in 1996; the lowest was 1230 in 1988.

- The scaled scores for fourth grade mathematics rose over the five administrations starting with 1230 in 1988 and ending with 1370 in 1996. The highest score for mathematics was 1370 in 1996; the lowest score was 1230 in 1988.

- The scaled scores for fourth grade science started at 1230 in 1988 and rose to 1380 in 1996. The highest scaled score was 1380 in 1996; the lowest was 1230 in 1988.

- The scaled scores for fourth grade social studies started at 1240 in 1988 and increased to

end at 1370 in 1996. The highest score attained was 1370 in 1996, the lowest was 1240 in 1988.

- In 1996, fourth graders in Worcester scored at least 40 points or more above their comparison score bands in all subjects. A comparison score band is a range of scores that permits a school to compare its results to what it would have scored if it had scored at the average level for its socioeconomic background. The comparison score band for fourth grade reading was 1280-1310 in 1996. The score bands show a slight variation for different subjects because the state average for each subject is different.

Proficiency Levels

- In reading, the percentage of students scoring at or Below Level 1 decreased from 50% in 1992 to 37% in 1996. Also, the percentage at Level 2 increased from 34% in 1992 to 37% in 1996. The top levels, 3 and 4, increased from 17% in 1992 to 25% in 1996.

- The percentage of fourth graders scoring at or below Level 1 in mathematics decreased from 55% in 1992 to 31% in 1996 while the percentage scoring in Level 2 increased from 34% to 50% between 1992 and 1996. In 1992, 12% of the fourth graders scored at or above Level 3 while in 1996, 19% scored there.

- Fifty-seven percent of the Worcester fourth graders scored at or below Level 1 in 1992 in science while 31% scored in the two lowest categories in 1996. In 1992, 29% scored at Level 2 and in 1996, 47% achieved a score of Level 2. An increase from 14% to 22% occurred at Levels 3 and 4 between 1992 and 1996.

- Fifty-one percent of the Worcester fourth graders scored at or below Level 1 in 1992 in social studies while in 1996, 33% fell into the same categories in social studies. Level 2 increased from 32% in 1992 to 46% in 1996. In 1992,15% of the fourth graders scored at levels 3 and 4 in social studies while in 1996, 21% scored at levels 3 and 4.

GRADE 8

Scaled Scores

- Reading scores for eighth graders have increased from 1200 in 1988 to 1310 in 1996. The highest reading score attained by Worcester eighth graders was 1310 which they achieved in 1996. The lowest reading score they received was 1200 in 1988.

- Scaled scores for eighth grade mathematics have increased from 1200 in 1988 to 1270 in 1996. The highest eighth grade mathematics score was 1270 in 1996 and the lowest was 1200 in 1988.

- Science scaled scores for Worcester eighth graders have risen starting at 1210 in 1988 and ending with 1270 in 1996. They had a high of 1270 in 1996 to a low of 1210 in 1988.

- Social studies scaled scores have risen from 1200 in 1988 to 1280 in 1996. The lowest social studies scaled score was 1200 in 1988.

- In 1996, eighth graders in Worcester scored either slightly above or at the ends of their comparison score bands.

Proficiency Levels

- In 1992, 57% of the eighth graders scored in the bottom two proficiency levels, e.g. Below Level 1 and Level 1, in reading. In 1996,40% of the Worcester eighth graders fell into these categories. The percentage of students scoring at Level 2 increased from 22% in 1992 to 37% in 1996. The percentages of Worcester eighth graders at Levels 3 and 4 in reading was 21% in 1992 and 23% in 1996.

- In mathematics, 67% of the eighth graders scored at Level 1 or Below Level 1 in 1992. In 1996, 49% scored in those same categories. The percent of students scoring at Level 2 increased from 17% in 1992 to 38% in 1996. Sixteen percent of the Worcester eighth graders scored at Levels 3 and 4 in 1992 while 14% scored at levels 3 and 4 in 1996.

- Sixty percent of the Worcester eighth graders scored at Level 1 or Below Level 1 in science in 1992. In 1996, 50% of the eighth graders scored at the two lowest levels. The percent of students scoring in Level 2 rose from 20% in 1992 to 34% in 1996. At the two highest levels, 3 and 4, the percent decreased from 19% in 1992 to 17% in 1996.

- In 1992, 62% of the eighth graders in Worcester scored at Level 1 or Below Level 1 in social studies; in 1996, 49% of the eighth graders scored there. The percent of students achieving Level 2 in social studies increased from 19% in 1992 to 34% in 1996. In 1992, 18% of the Worcester eighth graders scored in Levels 3 and 4; in 1996, 17% of the eighth graders scored there.

GRADE 10

Scaled Scores

- Massachusetts began testing tenth graders in 1994. This report will only deal with tenth grade scores or those scores that have occurred since the Education Reform Law of 1993. Please note that only two years of scores are available so the changes made over five administrations at grades 4 and 8 will not be evident in two administrations.

- Scaled scores for reading at grade 10 rose from 1220 in 1994 to 1240 in 1996.

- Tenth grade scaled scores for mathematics increased from 1210 in 1994 and to 1250 in 1996.

- Science scaled scores rose for tenth graders from 1220 in 1994 to 1260 in 1996.

- In social studies, tenth graders rose from 1210 in 1994 to 1250 in 1996.

- In 1996, tenth graders at Worcester scored within their comparison score bands in reading, mathematics and social studies, and scored slightly above their score bands in science.

Proficiency Levels

- Sophomores scoring in Level 1 and Below Level 1 in reading dropped from 58% in 1994 to 52% in 1996. The percent achieving Level 2 increased from 25% in 1994 to 28% in 1996. Seventeen percent of the tenth graders scored in Level 3 or Level 4 in 1994, and 21% of the tenth graders scored in Levels 3 and 4 in 1996.

- In mathematics, 58% of the sophomores scored at Level 1 or Below Level 1. In 1996, 53% of the sophomores scored at Level 1 or Below Level 1. In 1994, 26% scored at Level 2 in Mathematics; in 1996, 30% scored at Level 2 in mathematics. Sixteen percent of the sophomores scored in the two highest levels in 1994 while 17% of the sophomores scored at Level 3 and Level 4 in 1996.

- In 1994, 59% of the Worcester tenth graders scored at Level 1 or Below Level 1 in Science. In 1996, 52% of the sophomores scored there. Twenty-six percent of the tenth graders achieved Level 2 in 1994 while 32% achieved Level 2 in 1996. The percentage of students who scored in Level 3 and Level 4 was 15% 1994 and 16% in 1996.

- In social studies, 58% of the tenth graders scored at Level 1 or Below Level 1 in 1994 while in 1996, 52% of the sophomores scored in the two bottom levels. Students scoring in Level 2 increased from 26% in 1994 to 30% 1996. Students achieving the highest levels, Levels 3 and 4, increased slightly from 17% in 1994 to 18% in 1996.

GRADE 4 SCALED SCORES AND COMPARISON SCORE BANDS

Subject	1988 Total Score	1990 Total Score	1992 Total Score	1994 Total Score	1996 Total Score	1996 Score band
READING	1230	1260	1280	1300	1350	1280-1310
MATHEMATICS	1230	1260	1280	1300	1370	1270-1300
SCIENCE	1230	1250	1270	1330	1380	1290-1320
SOCIAL STUDIES	1240	1260	1280	1310	1370	1280-1310

GRADE 4 PERCENTAGES OF STUDENTS AT EACH PROFICIENCY LEVEL

SUBJECT	92 >1	92 1	92 2	92 3	92 4	*94 >1*	*94 1*	*94 2*	*94 3*	*94 4*	96 >1	96 1	96 2	96 3	96 4
READING	13	37	34	15	2	*6*	*40*	*38*	*8*	*7*	7	30	37	21	4
MATHEMATICS	8	47	34	10	2	*6*	*38*	*43*	*11*	*2*	3	28	50	16	3
SCIENCE	9	48	29	13	1	*4*	*36*	*44*	*13*	*4*	3	28	47	18	4
SOCIAL STUDIES	9	43	32	14	1	*6*	*38*	*41*	*10*	*5*	2	31	46	17	4

GRADE 8 SCALED SCORES AND COMPARISON SCORE BANDS

Subject	1988 Total Score	1990 Total Score	1992 Total Score	1994 Total Score	1996 Total Score	1996 Score band
READING	1200	1220	1220	1260	1310	1280-1320
MATHEMATICS	1200	1230	1220	1220	1270	1230-1270
SCIENCE	1210	1240	1230	1220	1270	1220-1260
SOCIAL STUDIES	1200	1230	1210	1240	1280	1220-1260

GRADE 8 PERCENTAGES OF STUDENTS AT EACH PROFICIENCY LEVEL

SUBJECT	92 >1	92 1	92 2	92 3	92 4	*94 >1*	*94 1*	*94 2*	*94 3*	*94 4*	96 >1	96 1	96 2	96 3	96 4
READING	23	34	22	17	4	*18*	*35*	*31*	*9*	*8*	11	29	37	17	6
MATHEMATICS	15	52	17	13	3	*14*	*43*	*31*	*8*	*3*	10	39	38	11	3
SCIENCE	12	48	20	17	2	*18*	*42*	*27*	*10*	*4*	13	36	34	14	3
SOCIAL STUDIES	14	48	19	16	2	*17*	*39*	*31*	*10*	*4*	12	37	34	14	3

GRADE 10 SCALED SCORES AND COMPARISON SCORE BANDS

Subject	1994 Total Score	1996 Total Score	1996 Score band
READING	1220	1240	1220-1270
MATHEMATICS	1210	1250	1230-1280
SCIENCE	1220	1260	1210-1240
SOCIAL STUDIES	1210	1250	1230-1270

GRADE 10 PERCENTAGES OF STUDENTS AT EACH PROFICIENCY LEVEL

SUBJECT	1994 >1	1994 1	1994 2	1994 3	1994 4	1996 >1	1996 1	1996 2	1996 3	1996 4
READING	22	36	25	9	8	22	30	28	15	6
MATHEMATICS	22	36	26	12	4	16	37	30	13	4
SCIENCE	22	37	26	10	5	15	37	32	13	3
SOCIAL STUDIES	22	36	25	13	4	19	33	31	14	4

EMPLOYEE SURVEY - Worcester Appendix E

Teachers

Rating Scale		
Yes/No Questions		Opinion
yes	1&2	Good to Excellent
No	4 &5	Not good, inadequate
Not sure, one way or the other	3	OK - could be better, could be worse

Note: Percentages may not add to 100% due to rounding

1	Education Reform	1&2		4 &5		3
1.a.	Are you familiar with the issues of Education Reform, the Law passed in 1993?	88%		4%		9%
1.b.	Do you feel you have a good understanding of the purpose and the goals of the law?	80%		5%		14%
1.c.	Do you feel that there is a lot of confusion about what Education Reform is all about?	32%		19%		25%
1.d.	Do you feel the issues of Education Reform are considered when school district plans are made?	77%		6%		17%
1.e.	Do you feel the issues of Education Reform are considered when school-based plans are made?	81%		6%		13%
1.f.	In your opinion is the school district taking positive steps to improve education?	88%		5%		7%
1.g.	Do you feel your job has changed because of Education Reform?	76%		12%		12%
1.h.	Do you think there has been an improvement in student achievement in your school due to Education Reform?	48%		17%		35%
1.i.	Do you think the improvements in education at the school would have happened without Education Reform?	45%		18%		37%
1.j.	Have you perceived an increase in school funding tied directly to improvements in education in your district?	61%		11%		28%

2	Educational Goals and Objectives	1&2		4 &5		3
2.a.	Are the school administration's goals and objectives generally clear and understandable?	92%		5%		4%
2.b.	Are you clear about the school district's goals and objectives as they relate to your own job?	87%		6%		6%
2.c.	Are there indicators issued to measure progress toward goals and objectives generally?	78%		6%		16%
2.d.	Are there indicators used to measure your progress toward goals and objectives?	87%		4%		9%
2.e.	Do you have a role in developing these goals and objectives?	85%		9%		6%

3	Curriculum	1&2		4 &5		3
3.a.	Do you believe that your district's curriculum is coherent and sequential?	82%		8%		10%
3.b.	Do you believe that your curriculum is challenging and tied to preparing students for life after secondary school?	78%		8%		14%
3.c.	Is there a coherent, on-going effort within the district to keep curriculum current with evolving trends and best practices in pedagogy and educational research?	85%		4%		11%
3.b.	Do teachers play an important role in reviewing and revising curriculum in the district?	66%		13%		21%
3.e.	Will the curriculum now in use in your school improve student test scores?	61%		7%		31%
3.f.	Do you believe that the curriculum content does not impact test scores as much as how a subject is taught by a teacher?	60%		16%		24%

EMPLOYEE SURVEY - Worcester Appendix E

Teachers

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Yes/No Questions		Opinion
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Not sure, one way or the other	3	OK - could be better, could be worse

Note: Percentages may not add to 100% due to rounding

4	Planning	1&2		4 &5		3
4.a.	Is the planning for important issues (e.g. curriculum, budgetary, etc.) within the district a top-down process?	73%		5%		22%
4.a.1.	If the answer is "Definitely yes" (1) or "Generally yes" (2), is there an important role for teachers and professional staff in the planning process?	55%		21%		24%
4.b.	If staff does not have an important role in developing plans, are decisions made by the central office/school committee explained so that you can understand the basis for the decision/policy?	50%		16%		34%

5	Communications and Mission Statement	1&2		4 &5		3
5.a.	Is there adequate on-going communication between teachers and district administrators? In other words, do you think that you know what is going on in the district?	59%		21%		20%
5.b.	Is there adequate communication between you and your superiors?	79%		12%		9%
5.c.	Is there a mission statement in place for your school district?	91%		12%		9%
5.d.	Is there a mission statement in place for your school?	94%		2%		4%
5.e.	Does the mission statement define how the school is run, and how students are taught?	84%		5%		11%
5.f.	Are these mission statements applied in the operation of the school and the teaching of students?	82%		5%		13%

6	Budget Process	1&2		4 &5		3
6.a.	Do you understand your school budget process?	42%		31%		27%
6.b	Do you understand how the budget process impacts your department?	52%		25%		24%
6.c.	Is the school budgeting process fair and equitable?	34%		17%		50%
6.d.	Are budgetary needs solicited and adequately addressed in the budget process?	38%		15%		47%
6.e.	Once the budget is approved and implemented, does the allocation and use of funds match the publicly stated purposes?	41%		7%		52%
6.f.	Given the circumstances, the school department seems to be doing the best it can with in the school budget process.	53%		10%		38%
6.g.	Are there deficiencies in this process?	29%		16%		56%

7	Professional Development	1&2		4 &5		3
7.a.	Is there an adequate professional development program in your school?	87%		8%		5%
7.b.	Is the program designed to meet school needs and tied to the new frameworks and assessments?	89%		5%		6%
7.c.	Is the program designed to change the content of pedagogy in classrooms?	75%		7%		17%

EMPLOYEE SURVEY - Worcester Appendix E

Teachers

Rating Scale		
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No	4 &5	Not good, inadequate
Not sure, one way or the other	3	OK - could be better, could be worse

Note: Percentages may not add to 100% due to rounding

7.d.	Are there deficiencies in the professional development program?	30%		46%		24%
7.e.	Did you participate in the professional development program in 1996/97?	90%		8%		2%
7.f.	Professional development is making a difference and will improve education in my school district.	80%		6%		13%

8	Supplies	1&2		4 &5		3
8.a.	Have you generally received sufficient and appropriate supplies to do your job?	69%		22%		9%
8.b.	Have you generally received sufficient and appropriate basic educational supplies (e.g. chalk, paper, pens, pencils, etc.) to do your job?	84%		11%		6%
8.c.	Have you generally been supplied with a sufficient number of a current edition of textbooks?	69%		21%		10%
8.d.	Are students given a copy of these textbooks to keep at home during the year?	66%		25%		9%
8.e.	Have you generally been supplied with sufficient ancillary curriculum materials (e.g. current maps, lab supplies, videos, etc.)?	53%		32%		14%
8.f.	Is the process for obtaining supplies and materials effective, time sensitive and responsive to your classroom needs?	64%		23%		12%

9	Facilities	1&2		4 &5		3
9.a.	How would you rate the overall state of school facilities (e.g. cleanliness, security, maintenance, structural integrity)?	50%		28%		22%
9.b.	How would you rate the overall state of classrooms, labs, and other teaching rooms/areas?	46%		27%		27%
9.c.	How would you rate the overall state of the common areas (e.g. hallways, stairwells, and cafeteria)?	49%		24%		27%
9.d.	How would you rate the overall state of the areas outside of the building (e.g. playgrounds, walk-ways and grounds)?	44%		28%		28%
9.e.	Would you agree with the following statement: "The school administration makes an effort to provide a clean and safe working environment."	77%		10%		13%

10	Computers and other Educational Technology	1&2		4 &5		3
10.a.	Are the usage of computers and other technological tools a significant part of the management practices at the school?	78%		9%		13%
10.b.	Are the usage of computers and other technological tools a significant part of the instructional practices at the school?	70%		12%		18%
10.c.	In terms of student usage, are computers generally available only in a computer laboratory setting or library/media center?	38%		55%		7%
10.d.	How many computers are located in your classroom?					
10.e.	Do you have a school computer provided for and dedicated for your usage?	38%		59%		3%

EMPLOYEE SURVEY - Worcester Appendix E

Teachers

Rating Scale		
Yes/No Questions		Opinion
yes	1&2	Good to Excellent
No	4 &5	Not good, inadequate
Not sure, one way or the other	3	OK - could be better, could be worse

Note: Percentages may not add to 100% due to rounding

10.f.	Is there a school computer provided for and shared by you and other teachers?	58%		34%		7%
10.g.	Are there computers available for and used on a regular basis by students?	80%		10%		10%
10.h.	About how many minutes a week does each student use a computer? (Estimated) ____min.					
10.i.	Is the number of available computers sufficient for the number of students?	31%		53%		16%
10.j.	Are the computers in good working order?	75%		11%		14%
10.k.	Are the software packages in the computers uniform and consistent with the instructional level to be provided?	66%		13%		21%
10.l.	Is there a policy or program providing for computer training for teachers on software and computers used by students?	71%		13%		16%

EDUCATION REFORM IN THE WORCESTER PUBLIC SCHOOLS

James L. Garvey, Ed.D.

School District Progress since the Education Reform Act of 1993

As I review the accomplishments of the 1997-98 academic year. I am more excited, committed and dedicated than I have ever been in my career to insure that every student is prepared academically, socially and emotionally to meet the challenges of the twenty first century.

In 1993, the Massachusetts Education Reform Act established a seven year plan to improve the quality of education in the state by increasing funds to enhance financial equity among school districts, providing a consistent level of funding to facilitate long-range planning, and by setting expectations for improvement in educational quality through, for example, curriculum, instructional materials and staff development. In this sixth year of its implementation, we are poised and focused to do the job for our students. The seven state frameworks are now in place for the first time and the Worcester Public Schools has its seven curricula that complement and embrace the frameworks in all of our schools.

Over the past five years, we have as a school system, under the direction of the Worcester School Committee, embraced the suggested formula that is part of the Massachusetts Education Reform Act. Due to this strong commitment, we are recognized throughout the state as a school system where education reform is working and has made a difference.

- Students' test scores are up, pupil/teacher ratios are down, student attendance is at an all time high, the dropout rate is down and teacher attendance is excellent.
- Old schools are being refurbished, new schools are being built at a record level, textbooks and supplies are available at an all time high and technology at all levels is being implemented as part of our massive five year plan.

- Our staff development program is the envy of everyone and other systems are adopting our model and tapping into the expertise demonstrated by our curriculum liaisons.
- Our School to Career initiative, which has helped us with our high school restructuring and career pathways, is now recognized as a model of excellence across the state.
- We are committed to providing a quality education to meet the needs of all of our students especially in the area of gifted and talented. Over the past five years, we have expanded and strengthened our gifted and talented program which includes PEAK, school wide enrichments, a 6th grade accelerated program in each quadrant and Honors and Advanced Placement programs. In addition, we have initiated after school music and art programs along with an all city chorus, orchestra and marching band.

As I travel daily throughout our city and meet citizens, especially parents, from every walk of life, I know that I am in a unique community where everyone is committed to making our schools work. The educational resources including buildings, teachers, program specialists, early childhood programs and adult literacy and training efforts serve everyone in a family in a coordinated and focused manner. Teachers and principals are staying the course and holding steady in the desire to set higher standards for children. Spurred by state legislation on standards and new assessment systems, everyone is learning what it is to set higher standards across the system.

Assessment and performance standards are becoming interchangeable. While we are beginning to see evidence of improved student learning as a result of school reform efforts, we believe that we are looking at reforms that are working. We recognize that change processes are complex and take time. Thus, rather than look prematurely for evidence of long-term effects, we focus on developing concrete images of what we are aiming for and on identifying intermediate outcomes. The intermediate products that we identify as benchmarks can help

Some may argue that we are awash in money, but nothing could be further from the truth. As an under foundation community, we are fighting to become one that will eventually achieve the per pupil dollar foundation figure that the Massachusetts Education Reform Act says that we must be at to provide the same equitable educational opportunity for our students as other students receive across the state. It should be stated that the success of these endeavors has been made possible thanks to a dedicated School Committee which has worked with this Administration on a focused mission that has held us justifiably accountable for all that we do. Without the strong leadership of our Mayor and the School Committee, we would not have been able to achieve all the benchmarks that have been accomplished during my tenure as Superintendent. In addition, the financial support from the City Manager and the City Council continues to demonstrate commitment to our schools. The working relationship that we have established with the leadership of the Educational Association of Worcester needs to be acknowledged and recognized as contributing to our success as a school system. I especially want to thank the President, Executive Director and members for their help and contribution to the School Performance Based Award Program.

Barriers to the Implementation of the Education Reform Act of 1993

The Worcester Public Schools, as an urban under foundation community, has had very few barriers to the implementation of the Education Reform Act. One major area is the length of time it has taken to get the Curriculum Frameworks approved by the Massachusetts Board of Education and disseminated to the local school districts. Another area of concern is the transfer rights of teachers from one building to another in a large system as they relate to the principals' authority to choose new faculty members.

The School System's Projected Plans for 1998 - 2002

The Goals of the Worcester Public Schools over the next 3 to 5 years will be to continue to put in place programs for our students that will enable them to reach their potential in order to prepare them for the challenges of the 21st century. We will continue to implement both our long range school construction program and the refurbishment of our existing school buildings. The five year technology plan, in its third year of implementation, will continue to be a priority of our system. Our on-going instructional and non-instructional recruitment efforts will continue to be aggressively addressed as we strive to have a work force that reflects the makeup of our student body.

School to Career initiatives, that are an integral part of our secondary school restructuring efforts, will be a priority with the inclusion of a well organized career pathway established for every student who graduates from high school. The collaborative programs with our 10 colleges and universities will continue to grow and enhance the quality of life for everyone in our community. Business partnerships and parental involvement will be enhanced and continue to be part and parcel of our specific goals on a year to year basis. Early childhood education will grow to the point that the vast majority of students entering kindergarten will have had a pre-school experience.

In the Worcester Public Schools, inquiry, innovation, entrepreneurship, risk taking and autonomy for school staffs are the keys to creating a system full of creative ferment. Teachers and administrators have a real stake in the success of their schools. They have been given the opportunity to challenge the status quo and to be held accountable for the ends, not the means of education. As the Superintendent of the Worcester Public Schools, entrusted by the community with leadership of the schools, I will work to help every child reach his/her highest aspirations. If citizens really want to see a place where public education is alive and well, visit the classrooms in the Worcester Public Schools.

Worcester Public Schools

Appendix G

Worcester, Massachusetts

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James L. Garvey, Ed.D.
Superintendent

September 14, 1998

Mr. Dieter Wahl
Auditor-In-Charge
Massachusetts Department of Revenue
Division of Local Services
P.O. Box 9655
Boston MA 02114-9655

Dear Mr. Wahl:

We have reviewed your revised Audit Report that was delivered on September 9, 1998. Again, I want to thank you and your team for the spirit of cooperation and professionalism that has permeated this entire process.

Listed below are four areas that, in my opinion, need to be changed or added.

I. I am asking that you include our new class size chart on page 30 (chart 13-1). This chart was given to you with the backup material after we reviewed the first draft.

II. On page 15, item 6, paragraph 1 – "Worcester Public Schools does not produce a complete School Committee budget by program." I am asking if this sentence is needed; it gives the impression that we are under some mandate to present this type of budget.

III. Please look at page 41, item 19, paragraph 2 – "These functions ranged from retirement receptions to School Committee meetings and Worcester Education Association meetings." I would respectfully ask that the sentence be revised to read the following way:

'These functions ranged from retirement receptions to School Committee meetings and Professional Development workshops held at the Worcester Educational Association building.'

IV. Page 31, line 17/bullet 6 – Add Broadcasting all School Committee meetings. (Broadcasting was left out of the line.)

Sincerely,

James L. Garvey
Superintendent

ACKNOWLEDGMENTS

This report was prepared by the Department of Revenue, Division of Local Services.

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The Division of Local Services would like to acknowledge the professional cooperation extended to the audit team by the Department of Education, Worcester Public Schools Superintendent Dr. James L. Garvey and the school department staff.